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movements were more extravagant and exciting than those of the others; they were allowed, and did, break out of line for extra flourishes that took their fancy while still remaining true to the spirit of each type of dance. A notable feature of the dances is the identification with spirits and animals on the part of the dancers. Mistakes in drumming and dancing are thought very inauspicious for the well-being of the community. Although men and women do not dance as partners, the dances give men a chance to show off their attractions, while the women give signs to men who impress them.

3. *Economics*

Production. The Orokaiva work force involves, in some ways, everybody from the age he can walk almost until the day of death. The very young and the very old are expected to make whatever contribution they are capable of. The division of labour between the sexes has been the subject of enquiry by Williams, Waddell and Krinks. A sex basis in the division of labour is obvious in a great many activities, as the charts clearly show.[7] But even where activities are 'shared' between men and women, it is most common to see each sex group work at a different aspect of the task; they rarely do exactly the same job. Calculations by Waddell and Krinks show that the Orokaiva are fairly fully occupied in terms of the number of weekly working hours. Their calculations suggest that, given the present technology and social organisation, there is comparatively little slack in the working week that could be taken up by cash cropping activities on a major scale.

The working group is most frequently the household, occupied in the *pure.* Sometimes close relatives work together on larger tasks, helping each other in turn. Although old men do maintain their own gardens, they tend to receive frequent help from sons, sons-in-law and sometimes sisters' sons. Co-operation between men is also common during hunting and housebuilding. Co-operative groups of five or more men or women are also seen occasionally, e.g. for making roofing for a house, planting and harvesting yams. Co-operation of a total village is rare, but there are co-operative fishing and hunting expeditions. Activities related to feasting tend to be communal also.

Distribution. The Orokaiva have a subsistence economy where the bulk of goods produced are consumed by the household of the producer. Though patterns of exchange will take up a good part of the present work, it is necessary to state at the outset that only a small percentage of everyday produce enters the exchange system in any way. Waddell estimates that only 4.1 per cent of taro produced in Sivepe is disposed of by sale, gift exchange or barter. While the proportion is twice as high in Inonda, this is due to quite recent changes in the economic network in that area. One is bound to agree with Waddell that food exchanges, whatever their economic utility, are no great drain on Orokaiva resources. Of the produce entering the exchange network only a minute proportion leaves the village where it is grown. At a comparatively large feast I saw in Inonda in 1967, I estimated that Inonda was giving away, at the very utmost, 5 per cent of its annual production. As plantings are always made on a scale sufficient for survival *even if the harvest is poor*, there will be a surplus of at least 5 per cent after a good growing season. Unless the growing season is good,

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TABLE II/5

SIVEPE: THE DIVISION OF LABOUR BY SEX
(*Source*: Waddell and Krinks 1968: 100)

	Men	*Women*
Total hours active	13,934	15,041
Total weeks present	349.7	363.1
Mean activity week	39.8	41.4

Activity	*Total hours*	*Percentage contrib.**
Men		*Men*
Rubber – harvest	157.4	100
Recreation	194.7	97
Hunting	1,289.3	93
Preparation of tools & equip.	198.1	91
Church work	182.0	88
Construction	1,160.5	87
Coffee – market	77.9	85
Other crops – plant	41.8	84
Sago-making	319.7	81
Yams – plant	225.4	81
– maintain	45.3	79
Purchasing	273.6	77
Taro – plant	1,714.9	75
Social obligations – other	732.7	73
Women		*Women*
Sweet potato/yam – market	51.2	100
Cooking	3,442.0	97
Sweet potato – harvest	900.2	92
Care of the sick	172.5	90
Taro – market	54.3	90
– harvest	2,133.4	87
Washing	117.5	75
Both		*Men*
Rubber – market	36.1	66
Fencing	45.7	64
Coffee – harvest	353.1	62
Miscellaneous	260.6	62
Clearing	2,614.7	61
Coffee – maintain	74.5	60
Social obligations – marriage	32.7	60
– visiting	873.9	56

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TABLE II/5 (*continued*)

Activity	*Total hours*	*Percentage contrib.**
Both		*Men*
Paid work	1,128.8	56
Other crops – harvest	1,109.0	54
Sick – personal	442.6	53
Yam – harvest	412.6	53
Coffee – process	398.4	53
Collecting firewood	234.1	52
Social obligations – mourning	783.9	51
Other crops – market	66.9	51
Church services	1,946.2	46
Meetings	898.7	44
Fishing	165.0	44
Council work	824.2	42
Taro – maintain	2,551.6	37

* Where one sex carries out more than two-thirds of the work and where the total amount exceeds .01 per cent (29.0 hours) of the total hours active for the whole sample.

there is a ritual prohibition, for which I shall later quote the mythological charter, to hold a feast at all.

In any case, there seem to be two basic limitations to the size of a feast. First, the custom of restricting the number of guests to the inhabitants of *one* village, usually of about the same size as the inviting village. There are of course many variations to this custom but the principle of limitation is usually present. Secondly, the generosity shown to the guests, though outwardly most impressive, is restricted by the amount the guests can physically carry away. Though the food lying on the feasting platform looks inexhaustible to the observer, and the guests are capable of carrying away a heroic amount of food after a feast, the overall economic impact is minor.

Waddell remarks most interestingly that, in comparison with the main crops (taro, bananas and sugar-cane), a far higher proportion of dry season crops enter the exchange network. This applies especially to sago, breadfruit, sweet potatoes and yams. Waddell does not discuss nuts, but these are often given to friends and function as the small change of sociability. Both *tuugu* and *puga* are stored for the season of shortage; betelnut is a traditional trade item. All vegetable produce is nowadays considered suitable for marketing. Villages near Popondetta have far more opportunity to sell or barter produce than the villages on the Mount Lamington foothills.

It is customary for animal food to enter the exchange network, either as a gift or as part of a festive meal to which guests are invited. Meat is ceremonial food, eaten for instance to mark the settlement of a quarrel. It is considered somewhat

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TABLE II/6

462 DIVISION OF LABOUR BETWEEN THE SEXES AMONG THE OROKAIVA IN 1923

(*Source*: F. E. Williams Papers W.5, dated Wasida 5.10.23)

Women
- Planting and small cleaning in garden
- Fishing for small fish
- Cooking
- Cleaning house and surroundings
- Pottery
- Bark cloth and painting of same
- Look after pigs and dogs
- String bags
- Mourning vests of Job's tears
- Mourning neck ornaments, of Job's tears
- Armlets of Job's tears
- Make shell and string belts

Men
- Clearing of gardens
- Hunting
- Large fishing
- Building
- Make spears
- Make clubs
- Make cane belts
- Make woven armlets and leglets
- Make shell and string belts
- Make wooden belts

Day's work of woman
(Ejiro of Borugata)
- Sometimes in garden . . . sometimes in village . . . but more often than not goes to the garden
- Going in the morning she will clean . . . plant . . . dig up taro . . .
- In afternoon she collects firewood . . . water (in a gourd, scooping it in with a folded leaf), . . . taro, etc. in her string bag (*eti*) and return 'at four o'clock'.
- Then she cooks for husband and children . . . after that *kaikais* betel and stops nothing

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222 4 Orokaiva: *tauga*; botanical: *cycas media*; Orokaiva: *puga*; botanical: *terminalia okaria*. There are two varieties of breadfruit, called *oga* and *eumba*. They are both somewhat unusual but I failed, in spite of sending samples, to obtain indentifications.

241 5 Details of garden production are given in Table II/3. Rainfall at Sivepe and Inonda is shown in Rimoldi 1966:109; Crocombe and Hogbin 1963:100.

342 6 A plan of a contemporary Orokaiva house is shown in Fig. 3. Recent changes in house design, house construction and domestic amenities are summarised in Table II/4.

462 7 See Tables II/5 and II/6. Williams' data are taken from an unpublished manuscript and appeared first in Schwimmer 1969:226. I have discussed the Orokaiva division of labour in more detail in Schwimmer 1969: 145–50 and explained the apparent discrepancies between Williams' table and Waddell's and Krinks' statistics.

439 437 8 Crocombe and Hogbin (1963) provide a list of prices prevailing in this trade. They report that there is still some trade in shell ornaments from the coast and in feathers for head dresses from the mountains. Informants at Eroro, on the coast near Buna, gave me details of their traditional trade with Managalasi of the nearby mountains. A Sivepe man who has hunting rights to land near Ajoro goes there to hunt birds and sell the feathers. His chances of finding any of the more valuable birds near Sivepe are remote. The difference in Sivepe and Inonda patterns (i.e. the foothills and the alluvial plains) appears from the data in Table II/7. It will be seen that Sivepe stock is to a far greater extent inherited, whereas Inonda stock is to a far greater extent acquired through brideprice (value $13), barter (value $21.60) and other exchanges (value $13.70).

439 438 437 9 Dr. Waddell has provided a detailed statistical table of the geographical distribution of subsistence produce (Waddell and Krinks 1968:218). This table provides clear and detailed information on the geographical range of the Sivepe exchange network. A full descriptive account may be found in Schwimmer 1969: 41–69.

648 10 An interesting picture of this period of Orokaiva history is drawn in Beaver, 1916.

795 11 Full information on these cults will be found in Chinnery and Haddon (1917) and Williams (1928). If has escaped previous commentators that Bia, who started the taro cult, was employed for some years by Monckton, and participated in various punitive enterprises with an alacrity most pleasing to his master. He was described in Monckton's books in rather revealing detail (e.g. 1921: 185, 268, 269, 295, 308; 1922: 10, 13, 65, 136, 172, 214, 216). For the present relationship between the Orokaiva and the missions, see Schwimmer 1969; 123–33.

871 872 797 657 648 12 The general subject of Orokaiva economic development since 1951 is very fully covered in numerous bulletins published by the New Guinea Research Unit from 1963 to the present, and also in Schwimmer 1969. A general indication of the investments in socio-economic development is given by a table of public expenditure in the territory of Papua for the years ended 30 June 1961 to 1965 (Commonwealth of Australia: *Annual Report of the Territory of Papua for the period 1 July 1964 to 30 June 1965*, 179). The growing emphasis on educational services is perhaps the most notable aspect. Table II/8 indicates the pattern of school attendance. Table II/9 summarises the activities of the Higaturu Local Government Council; roads, water supplies and clinics are perhaps the projects most relevant to development.

101 13 The three villages have been sketched in figures 4, 5 and 6. Education and occupational experience at Sivepe and Hohorita are analysed in Tables II/10 and II/11.

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writings of Berndt, Brookfield and Brown, Hogbin, Lawrence, Meggitt, Rappaport, Salisbury, Serpenti, Wagner and several others. The Orokaiva system falls within this general pattern, though with less emphasis on overriding rights held by clan and lineage, and more emphasis on individual rights than, for instance among the Siane and Mae Enga, less emphasis on corporate leadership than among the Garia, and more incidence of duality of rights than among the Chimbu, and so forth. Though the time has come when a comparative study of these systems could profitably be undertaken, it falls outside my present purpose which is to analyse the significance of land transactions, especially among the Orokaiva.

In order to carry out this analysis, we must first describe the basic categories of land transactions. We shall not use the term 'transactions' solely in a legal and economic sense, but more broadly in accordance with Mauss' concept of exchange as a total phenomenon. Thus, land enters crucially in 'transactions' between husbands and wives, and between men and spirits, and these 'transactions' will be considered before we turn to the more familiar topic of transactions between men. Here we have to distinguish between transactions within and outside the patrilineage. Our general argument will be that all of them occur as part of a continuing series of social exchanges, and that useholds granted on varying conditions must be regarded basically as benefits exchanged for other past or future benefits. In as much as paternal protection and filial service are very common objects of social exchange in these transactions, paternal protection being mediated by land grants, we may observe the practical operation of a system of patrifiliation.

A few words should first be said about the significance of land itself. The Orokaiva spend most of their days in their individual garden plots. They are tied to them not only by a total dependence on the produce, but also by deep bonds of affection. A man and his wife like nothing better, generally, than to spend the whole day, and virtually every day, in their garden together. These are intimate places where nobody would go without an invitation and where nobody is disturbed or called away except in a serious emergency. They are the most private places the Orokaiva has, much more private than the village houses where every sound and movement can be seen or overheard. Even so, physical privacy is secured often by no more than a narrow ring of second growth around the cultivations. Many people have a garden house, ornamental shrubs, places to rest and sit. Orokaiva gardens can be very homely and beautiful. People rest there in the heat of the day. They are favourite places for love-making.

The most ubiquitous of all social transactions mediated by the land occur between husband and wife. Perhaps the most important rights and obligations arising out of marriage have to do with garden land. Both the male and female gardening tasks are, of course, learnt before marriage. Bachelors have their own gardens in which they do all the work which is not specifically set aside for women and taboo to men. They clear the land; they help with planting (using the digging stick); they protect the land against pigs and other dangers; they weed. It is a fact, already observed by Williams, that a girl choosing a husband takes serious account of the state of the garden of her intended spouse. She does not like to marry a man whose garden is in a poor state. The bachelor is assisted by a sister, or brother's wife, or by his mother with the dropping of seed into the

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423 ground, and with harvesting, which he may not do. Upon marriage, the new wife
241 is usually expected to garden on her husband's land. There is a fiction that, at the time of marriage, she 'does not know' the work she is expected to do on the
[581] land of her new affines. Her mother-in-law has to instruct her and it is only after
[585] such an apprenticeship that her husband's people consider her competent to tend taro on their land, harvest it and offer it to visitors in proper style. She would usually have been trained in these tasks by the women of her own clan, but the subtleties of family traditions differ.

423 As against these male and female obligations, we may note some clearcut
593 rights: the man's right to his wife's labour and the wife's equally important right
241 of unlimited access to the husband's garden land and to its produce. This right extends not only to harvesting food for the household, but also for gifts she may choose to make outside the household, providing that she manages the food
[578] supply so as to avoid shortages. A domestic dispute I observed in Sivepe
[596] (referred to in Chapter III above) illustrates the importance attached to this married woman's right. When this dispute was adjudicated, the 'explanation' of the breakdown of the marriage was found in a single incident, namely the husband's instruction to his wife not to go to his garden again. Here, in the view of everyone present, lay the 'root' of the trouble, a judgement with which the husband was willing to agree. This prohibition to go to his garden is one of the few things a husband is on no account to utter to his wife; it amounts to total repudiation of the conjugal relationship.

[431] This brief discussion of social practices has already indicated that a garden
[462] plot is a gift made by a man to a woman, while the productiveness of the land is a gift from a woman to a man (because a man can neither plant nor harvest). Let us now consider to what extent the nature of these gifts may be clarified in the
423 light of rituals, myths and indigenous explanations. It will be best to begin with
241 some legal ideas about land. As has been pointed out by Salisbury (1962: 67ff.) among others, several sets of rights arise with respect to any one piece of land: rights of the village, of the clan, of the lineage, and of the 'father of the ground' or trustee. It is the last-mentioned person who assigns a piece of land (*enda*) to a cultivator for the purpose of making a garden (*pure*). The cultivator to whom
[562] land may be assigned may be either male or female. Among the Orokaiva it is
[462] common for women to have land assigned to them for cultivation in their own right, even though most land is assigned to males. They receive this land mostly from a father or brother, sometimes from their mother. When a woman wishes to have a garden established on her land, she (voluntarily) transfers the land to her husband or another male on a temporary basis so that he can carry out the
[789] crucial male tasks without which the garden cannot be made. These tasks are ritual as well as productive. It is common for the men of a clan to hold a feast together and to kill a pig from which they eat and obtain strength (*iwo*), before clearing new ground. The fertility of the soil depends greatly on getting a good burn after clearing, and a good burn depends on climatic conditions that can never be wholly predicted. I was unable to find out much about the ritual connected with clearing but gather it had to do with control over the sun and
[775] the rain. Another magical danger that arises in new gardens comes from the ghosts (*sowai*) lurking in the reverted gardens or bush that is being cleared. The garden thus established is the gift made by the man to the woman; the *pure* is

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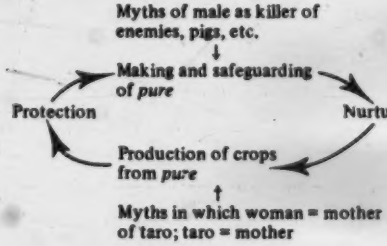
felt to be a feminine thing. In the myths it is the mother who buries the taro shoots (her children) and covers them with leaves and earth which are equated with her body. I shall show this in more detail in the next chapter.

In Williams' report on the division of labour, planting is shown as a female task, whereas the time studies of Waddell and Krinks suggest that the activity is actually shared by the couple. There is no real contradiction here, nor much evidence of change, as the man's task is to pound holes into the soil with his digging stick whereas the woman does the actual planting, or burying (*kovari*) of the seed.

Unless the normal rules are suspended, as happens at feasting time, men do not harvest taro or other products of the *pure* where taro is planted. (The rules are different for the yam garden as we shall see later.) The explanation that is given of this rule is that only the women know how to harvest crops to best advantage, i.e. at the right time and in the right quantities. If men harvested, the supply would never last through the lean season. The woman is responsible for nurture, in the widest sense. It is her task every day to bring home garden food in the large string bag suspended from her head. Contrary to what white observers have sometimes believed, this is not a symbol of female slavery, but rather of female power and it is done proudly. When my wife started to bring home produce from our own garden in Sivepe (in a different kind of bag), the women crowded round excitedly and congratulated her. The food gifts that are constantly sent from one household to another may be, at least partly, regarded as a display by the women of their own success. The products of the taro garden (though not the yam garden) may ultimately be regarded as a gift from women to men. We may summarise the total transaction as follows:

MODEL 11


Myths of male as killer of enemies, pigs, etc.
Making and safeguarding of *pure*
Man
Protection
Nurture
Woman
Production of crops from *pure*
Myths in which woman = mother of taro; taro = mother

On the basis of such a model, what precisely is the nature of 'rights' in land enjoyed by husbands and wives? A simple analogy would be a jointly owned machine of which one party controls all the bolts and the other controls all the nuts. The assets of neither party have any value independently of the other. Value can be created only by the co-operative *action* of screwing together bolts and nuts. Land transactions between Orokaiva husbands and wives are similarly a sequence of cumulative co-operative actions, such that each move by one party calls forth an appropriate response. The only 'rights' are 'rights' to responses once certain moves have been made. Legal disputes can in practice arise only if

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child into the water because it was bad,' she replied. 'I am going to collect cabbage.'

(*Commentary*: The reference to the water is the first of a series of apparent lies which always hide a symbolic truth. In this case it is easy to see the meaning, as several myths exist linking the origin of the taro with water. In one myth a woman was prodding the ground with a digging stick. She found water there (and this was the origin of water); later taro grew in that spot. In another myth a boy and girl who were siblings were washed away in a flood on a coconut tree. At the place where they finally landed they discovered taro. Taro, being identified with a human child, is thought of a growing in the water of the womb. The growth of the taro plant requires a very great deal of water and heavy rain so that the growing plant actually lives in a watery environment, which thus resembles a womb. In this sense, her statement is true.)

4. 'I am going to collect cabbage.' Having said this she climbed a cabbage tree. As she looked down and saw the place where she had put her children, she began to weep. When she returned to the ground, her husband said: 'Wife why did I see you cry when you climbed to collect cabbage?' 'When I went to collect the cabbage the sap squirted into my eyes and I rubbed them,' she said. 'You are lying,' he said.

5. When the children were fully grown, she took them to the mountain far away. She told them their history; 'therefore, I must leave you behind and you must stay,' she said. When she joined her husband again, he asked: 'Why did you stay away so late?' 'As soon as I had done my work and planted my seed (*bere kovitie*), I started on my way home,' she said. 'Woman, you are telling lies,' he replied. When the man understood what his wife had been saying, he went away.

(*Commentary*: When a taro is fully grown it begins to grow shoots on the side of the main rhizome. It is then the duty of the woman to take cuttings from the plant. Strictly speaking these cuttings (Orokaiva: *bere*) are tops of corm-bearing bases of petioles (*Vide* Barrau 1965). These cuttings[1] are taken to a new garden being established, usually, at some distance from the old one. When the husband heard his wife saying this, he understood at once that she had been hiding the offspring she said she had thrown into the 'water'. He could not know, however, that his wife had had twins and this became his undoing.)

6. The two children, all by themselves, made a garden, ate their food and kept alive. The man went to where the two children were staying. The female sibling (*du ate*) had gone to collect taro while the male sibling (*du bite*) was lying asleep with his chest turned upwards in the shelter (*gegu*). It was there that the man found him, understood at once he was his child and cut out his heart and intestines. He ate these, leaving the rest of the body behind for the next day.

(*Commentary*: I do not know whether the narrator of the myth made a mistake when he said at the beginning that the hidden children were 'male twins'. There is no doubt whatever that at the stage the story has now reached they are siblings of opposite sex. While we cannot rule out the possibility of a narrator's mistake, my informant was an unusually reliable one and it is quite possible that there was an actual change of sex. This will become clearer later when we analyse the significance of male and female roles in this tale. The horticultural reference in this passage is to ordinary harvesting routine. The woman digs the taro and places them in a *gegu* or shelter where they stay until

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nature, partly a human nature, and these aspects are only partly differentiated. He ravages taro lying in the *guga* in the manner of a wild pig. The wild taro *bere* planted by the woman in the beginning of the myth are fitly equated with his 'children' because Totoima's realm is the bush; bush taro are the children he might be expected to engender. The garden, however, is his wife's realm. It is she who nurses taro to maturity and who nurtures her family. She too has a dual nature, as she nurtures Totoima and also conspires to kill him. This second aspect is found in numerous myths concerning Totoima's wife. In the present version not only the wife but also the daughter is involved in conspiracy.

The taro are her children, and it is right that Totoima should eat them. She feeds them to him. However, she places restrictions on Totoima's appetite. The *bere* of the domestic taro must be preserved for planting. Hence it is the woman's duty to withhold these from her husband. Woman's two aspects – nurture and domestication – are crucial in the ritual statements made through gifts of taro.

Here we encounter again the dichotomy in sex roles to which I referred in the previous chapter. The male tends to be concerned with the killing of enemies and wild animals, the driving out of ghosts, the felling of bush before a garden can be made. On the other hand, the female is identified with the cultivation of taro. The *dema* of the taro are regularly called upon in drum songs performed at harvest time:

Bako jape teijo jape bako
Punduga kovari terijo jape bako, etc.

'Taro-being, ancestress, come to our aid, ancestress, taro-being; with the *punduga* harvesting help us, ancestress, taro-being', etc., where *punduga* is a variety of taro and the song continues with lines similar to the second one, invoking a great number of taro varieties, one after the other.

Taro, clearly, is a feminine plant. The first taro plant is found by a married woman in several myths I have recorded, though in others it was found by a brother and sister travelling together. One may well ask why it is, if taro is a feminine plant, that in this myth (and in others) we find its origin associated with two siblings of opposite sex (*du*), and why in particular it was the male sibling who was lying in the *guga* while the female one was in the field. Those who like to impute laziness to the Orokaiva male may say that this scene is only too typical, but one cannot seriously believe this myth to indulge in caricature. In my explanation I shall anticipate an argument developed at greater length in Chapter VIII. It is a male sex role to clear a garden and give it to a woman; it is a female sex role to grow taro and give it to a man. These gifts are complementary and mediate the relationship between man and woman. The Orokaiva will classify a garden as a feminine thing 'because it is given to the woman' and a harvested taro as a masculine thing 'because it is given to the man'. This is why the taro lying in the *guga* was a male sibling.

Evidence presented in the course of this chapter will show that Orokaiva regard taro as having a dual nature: while in the earth, they are identified with the woman who nurtures them and who regards them and nurses them as her children. When harvested they are victims to be killed, cut up and cooked and finally eaten. In this role of victims they are male, because the male is the killer

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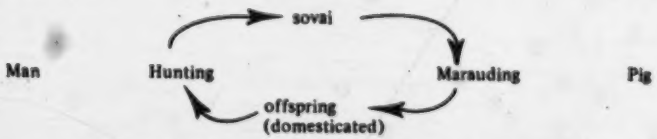
231 distinguishes wild pigs from domestic ones. Once the spirits have been effectively
825 expelled, the piglet *thereby* becomes domesticated. This means that it obeys the
[788] calls of its mother. It learns to forage in disused gardens but keeps away from
[775] growing taro. The piglet will not stray too far into the bush but comes home every night to be fed, and goes to sleep under the house.

Yet some danger of *sovai* contamination always remains. It may happen that a village pig stays away in the bush and does not return when its mother calls. The mother keeps on calling it from day to day, still hoping that it will return, but after a fortnight or a month it is accepted that the pig has gone wild. Or else it does return when the mother calls but returns to the bush as soon as it is fed.
[775] In all such cases people say that the spirits took the pig away and did not send it back.

These facts suggest an exchange cycle arising out of the following four notions: (1) A man turns into a *sovai* upon death. (2) *Sovai* entering pigs maraud gardens and attack humans. (3) A pig is domesticated by the driving out of the *sovai*. (4) Meat from the domesticated pig provides man with the *ivo* (strength) he needs for hunting pig. (This *ivo* makes man a dangerous *sovai* after death.) This cycle may be expressed as follows:

MODEL 22



431 Live domesticated pigs are not used a great deal for the mediation of social
231 exchange. Certainly the rearing of pigs enters widely into the exchange of
[462] prestations between the sexes, for it is a task women customarily perform for close kinsmen (husbands, brothers, sons). In addition it is not infrequent for piglets to be given to relatives and friends from different villages whose wives then rear them 'for the owner'. Salisbury (1962) noted a similar custom among
437 the Siane, but here the purpose was somewhat different. The Siane have feasts
231 at which 150–200 pigs are slaughtered. Here the recalling of lent pigs is an essential prerequisite for the holding of a feast and, indeed, feasts on this scale
[171] would be impossible unless the task of rearing was distributed among several villages. Orokaiva feasts involve far fewer pigs (seven, at a Hohorita feast, seemed normal). Admittedly, lending pigs for rearing does have an obvious economic advantage, similar to the one suggested by Salisbury: once the owner has lent a piglet to a man from another village, he finds it easier to resist demands that will be made from time to time by relatives who 'urgently' need a pig for purposes too compelling to ignore.

Basically, however, this institution is just another way of mediating social exchange. By lending a man a piglet one starts a partnership. The partner does not usually return the pig he has reared but instead gives a piglet which will in turn be reared by the original donor. One might say that the offspring of the donated pig returns to its 'mother's' village. In this way the institution of

5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

crucial passages verbatim. In the full text, the brother comes back four or five times to the miracle that chiefly concerns him: the symbiosis of coconut and areca, dropping their fruits side by side and thus (as he implies rather than states) fertilising one another. Taking this symbiosis as a fact of nature, the hero uses it to explain several other mysterious facts: (*a*) why all the bachelors died; (*b*) the ritual uses of coconut and *areca*; (*c*) why the Orokaiva consider coconut masculine, *areca* feminine. To answer the first question, he refers to an easily verified fact: the *peperuma* of the coconut do look like a girl's breasts; they are very dangerous if one falls upon them with any force. His sister was clearly an *embavo*, a coconut spirit. In this way the deaths are, to Orokaiva thought, adequately accounted for.

The hero explains two types of ritual uses of coconut and *areca*, namely those related to mortuary feasts and those where the sex of the recipient of the nuts is opposite to that of the donor. The instruction that nobody should eat the nuts lying under the trees, on pain of death, constitutes a mythological charter for the taboo placed upon the cocopalms and *areca* palms owned by a person recently dead. An informant explained a further implication to me, which is not very clear from the version I quoted: namely that it is customary to place coconuts and *areca* nuts upon the grave of a dead affine. Thus it was the duty of the hero to place coconuts and *areca* nuts upon the grave of his brother-in-law; and the duty of his wife to do the same for the grave of her sister-in-law. In order to clarify these points, the myth tells of the wife's desire to eat the nuts and the hero's refusal to let her have them.

In a somewhat elliptical manner, the hero lists or implies three sets of rules concerning gifts of coconut and *areca*, where the sex of the recipient of the nuts is opposite to that of the donor. The sets are:

	Areca		*Coconut*
1(*a*)	The man fetches the nuts from the tree.	1(*b*)	The woman *helps to fetch* the nuts from the tree.
2(*a*)	The man gives the nuts to the woman.	2(*b*)	The woman cooks the nuts for the man.
3(*a*)	The girl offers nuts to her lover and carries an offering of nuts at initiation.	3(*b*)	At a girl's initiation, a man prepares coconut oil which is used as a ritual cosmetic.

The first opposition is made quite explicit in the hero's speech, but is not free from casuistry. Men usually fetch not only *areca* but also coconuts from the high palms on which they grow. The woman may help by collecting coconuts once they have dropped to the ground, and by carrying them home. Very often, however, the coconuts are carried by men, who tie two nuts to a stalk, thus creating a huge effigy of a phallus. The feeble empirical basis of this opposition only serves to emphasise that we are here being taught an ideology which requires the opposition.

The hero's second opposition centres on the culinary use made of the nuts. *Areca*, in opposition to coconut, has no place in the kitchen. The fact that coconut is also often eaten raw would weaken the opposition, but this is

466 days per year on the plantation of his village.(1) Those who
worked 60 days or over were thereby exempted from head tax
245 (then ten shillings per year). Those who did not were liable not
651 only to head tax but also to a fine of £2 or imprisonment with
hard labour for a period of three months.

Evidence is inconclusive as to how much work was
245 required in practice. Despite the reference to sixty days' work
466 per year, crops like coffee needed constant attention and if only
sixty days per year were to be performed by each man, either
work days would need to be staggered or workers rostered. At
first government officers required 120 half-days, but in most
villages once the crops were in bearing all men were required
to attend every morning from Monday to Friday throughout the
year.(2) None of the foremen had watches and it is impossible
to know how long men worked in fact, but informants in widely
separated parts of the area claim that they were required to
work until noon in the coffee gardens. In addition, men took
turns to carry the produce on foot to the government base at
Higaturu every Saturday. This involved a walk of about fifteen
miles in each direction from the Ongoho (Asigi) community
block.

462 Women took no part in cash cropping, but they did
most of the gardening. Men sometimes helped in the food gar-
dens in the afternoons.

657 Reports of the period contain many references to the
peoples' lack of enthusiasm for the scheme and heavy sanctions
245 were applied by government officers to have their programme
466 enforced. In 1925 the Resident Magistrate tried to extend the

(1) Men who had been away as indentured labourers were exempt from this requirement for three months after their return to the village.

(2) At several places near Higaturu people claimed that they were required to work afternoons also during busy periods. After such periods they would be allowed a week or more off with no plantation work. It seems likely that this was done in the villages close to Higaturu which were under closer supervision by the officer in charge of the plantations. In the more distant areas the officer seems not to have delegated any authority to vary the regular pattern. Humphries (1944 : 3) notes that the specified period of 60 days (he says three months) was not observed in practice and that "in fact men were called upon to work whenever circumstances required them".

extension staff left, the internal tensions re-asserted themselves. [245] [578] [654] [435]

The people made an attempt to keep the garden working as the price of coffee was then 3/3 per pound. Persons from several sub-clans participated in harvesting, pulping and drying and a consignment of coffee was taken on foot to Popondetta (a distance of about seventeen miles each way by the paths then in use). For the first time women and children helped with the harvesting. The income from sales was distributed by the coffee boss, but disputes arose over the proportions due to the "landowners" for the use of the land and to the coffee boss for his supervision, as well as the relative shares to be given to those who had done the work, for some had not worked as many days as others. Members of other sub-clans again withdrew from the project. The coffee boss himself and some members of Hoiwo'undi sub-clan occasionally harvested a little coffee to provide money for particular needs, but most of it was left untouched. No further maintenance was done. When the Higaturu Council and its supervising officer, Mr. Normoyle, strongly advocated planting by individuals rather than groups, a number of people took seeds from the community garden and established their own individual coffee plots. [462] [464] [578] [433] [434]

When the Higaturu Council erected a coffee factory in Popondetta late in 1959, councillors were encouraged to maximise coffee production in their areas. The Ongoho councillor (who is a half-brother of the ex-village constable)(1) was able to persuade some people to start harvesting again. On this occasion each family was to be allowed to harvest, process and sell whatever coffee its members picked.(2) People were to be allowed to pick anywhere and at any time. No maintenance was done except on one occasion at the beginning when all people worked together to clear the undergrowth. This system [578]

(1) When the council was formed all village constables were compulsorily retired. [625]

(2) The produce was still taken to Popondetta on foot. The Higaturu Council provided a tractor and trailer to collect coffee from various points along the main Saiho-Popondetta road, but Ongoho was about eight miles from the nearest point. As a flat rate of one penny per pound was charged for the service, the Ongoho people did not use it. They used to leave Ongoho at dusk and carry all night and arrive at the factory early the following morning. [489]

461 recorded every afternoon, when each able-bodied adult was asked
125 how he had distributed his working hours. Of the population of 50, 25 were able-bodied persons over the age of 16.[1] These fall into 2 distinct categories according to age. Seven householders are between the ages of 45 and 65 years, and the other 5 between 25 and 35 years of age. There were no younger men or boys over 15 years in the village. Five of the women were aged 45 or more, 5 were between 25 and 30, and 3 younger women whose husbands were absent in employment, were staying with their kin in the village. One Jegase woman was a total cripple.

857 Nine of the 24 children attend school and 11 are 5 years of age
[871] or under. The rest, 2 boys and 2 girls in the 10-15 age group gave only intermittent assistance in garden work. The boys would often go hunting but were not engaged in productive work as regularly as their elders. The girls had a relatively heavy schedule of domestic chores.

592 The household containing a nuclear family is the basic unit of production and consumption. Members of an expanded family usually make their gardens on adjacent plots and the men usually co-operate in the heavier clearing work. Its members usually travel together to their gardens, but each household then cultivates its garden [462] alone. Apart from the harvesting, which is the task of women, the division of labour between sexes in gardening activities seems to be flexible in each household. Women assist in clearing undergrowth for new gardens and men join them in planting and weeding. It will be seen from Table 4 that men spent nearly as much time as the women in subsistence gardening during our survey. A

342 House-building is carried out generally by the householder and
476 any adult sons, with only occasional assistance from a neighbour
[462] or another kinsman. Wives sometimes help to prepare materials such as sago thatch for the roof.

[824] Larger work-groups than these are seldom mobilized for subsis-
[461] tence activities.[2] One or 2 men can readily clear enough secondary growth for their own needs and little co-operation is

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[1] Included among these were 1 man whose activity was restricted by tuberculosis, and another very old man. However, both maintained their own gardens.

[2] E. Waddell (personal communication) suggests that assistance with house-building is not 'occasional' but 'considerable' especially with making roofs; he also points out that large work-groups are assembled for harvesting yams (which do not need to be left in the ground for storage). Neither type of co-operation was in evidence during our short survey of work patterns.

A. [See Category 461, p. 28--Analyst]

8: Waddell & Krinks E-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

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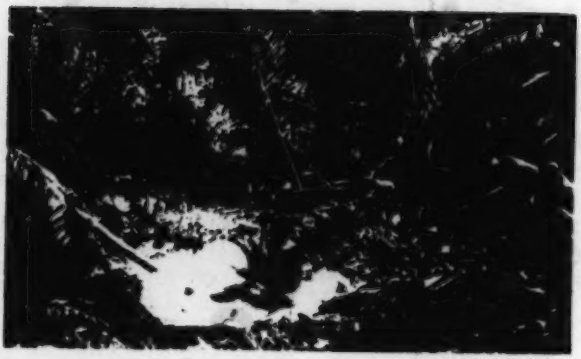

Plate 3. Sago-making - possibly the most arduous of subsistence tasks and invariably a group enterprise.

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Plate 4. Sivepe - women are responsible for keeping the central area free from weeds and refuse, as part of 'Council work'.

252 gardens. If absolutely necessary it will be made without outside [461] assistance, such being the case with one household with inadequate food supplies in its gardens in period III because the head had been absent for several weeks earlier in the year.

241 (ii) Seasonality and the pattern of subsistence food production. While no significant 'dry season' occurred during 1964, the data [262] gathered suggest that the cycle of agricultural activities is partly designed to allow for a dry spell at mid-year. During period II little taro or yam were producing and breadfruit and sago replaced these as the major contributors of carbohydrate to the diet. Yet an agricultural system which is characterised by a period of food scarcity was disrupted by unseasonally wet weather. Heavy rains deterred people from carrying out routine garden tasks, including food gathering, and probably accounted for the postponement of sago-making. On a number of nights during this period evening meals were not prepared because of rain and individual families went to bed hungry.

433 (iii) Marketing of subsistence produce. This is only a minor 512 activity amounting to 0.3 hours per man-week. Food crops may be sold either at the weekly market at Saiho hospital or exchanged for trade goods at Sasembata mission station, but their rates are so [432] low that there is no systematic production of food crops for sale to these bodies.[1] Although more favourable prices probably obtain at Popondetta market, distance and lack of transport preclude the Sivepe people from selling there.

(iv) Other subsistence activities. Other subsistence activities comprise the preparation of tools and equipment and house construction. Handicraft work only accounts for 0.3 hours per man-week and primarily involves the preparation of axe handles, spears, traps and nets for hunting, troughs for fermenting coffee, a variety of mats and bags made from woven palm leaves, and various decorative items of a ceremonial nature.[2]

While mats and bags are made throughout the year, the other tasks are largely related to seasonal and specialised needs, the peak (0.5 hours per man-week) occurring in period III with the preparation of hunting equipment and ceremonial dress for the Christmas festivities.

Forty per cent of the time spent in the preparation of tools and equipment is taken up by ceremonial goods, 25 per cent by woven baskets and mats, and 20 per cent by traps, nets and spears for

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[1] See p.20.A

[462] [2] String bags have been excluded on the grounds that, although probably the most important piece of equipment, the women usually make them in the course of doing household tasks.

A,[See Category 435, p.20--Analyst]

433 hunting. The little time devoted to the preparation of tools for
512 the main subsistence enterprises reflects the degree of technological substitution which has occurred since contact.

Construction and repair of houses normally continues throughout the year, here occupying 1.6 hours per man-week. In Sivepe such activity declined during the course of the survey as plans were formulated to transfer the village to the new site. Of 13 houses whose occupants were not newcomers to the village, 4 were completely rebuilt during the year and, in addition, 2 completely new houses were built and a number of extensions and repairs made to others.
[342] This 'crude birth rate' suggests the life of a house to be about 3.25 years. Since each house takes about 110 man-hours to build (including the gathering of materials), about 0.6 hours per man-week must be devoted to reconstruction in a normal year. In Sivepe about 0.9 hours were devoted as a result of additional houses being built, the balance (0.7 hours) accounting for repairs and minor extensions.

[252] Household tasks occupy 5.3 hours per man-week, cooking predominat-
[462] ing with 5.0 hours. Of necessity, they vary little through the year.[1] Much of the time taken up by cooking involves simply tend-
[372] ing the fire on which the food is being prepared and it is then that the women often work on their string bags. Most firewood is obtained as a by-product of clearing, suitable lengths of timber being stacked in the garden to dry out and then carried to the village as required.

All the above subsistence activities (food production, construction, handicraft work and household tasks) can be described as 'productive' in that 'the purposeful alteration and combination of physical material' (Udy 1959:2) can be discerned in them. Together they account for 26.6 out of the total of 30 hours per man-week devoted to the subsistence sector of the economy.

512 Only 3.4 hours per man-week are spent in fulfilling social
182 obligations. Although categorised here as non-productive activity, it should be stressed that ritual and informal social interaction are part of the fabric of the total economic system and the kinship networks which form the framework for these interactions serve as the major mechanism for distributing goods produced within the subsistence economy.

171 Belshaw, in discussing Melanesian exchange, states (1965:35):
431 A primary point to note is that a very high proportion of social contacts between adults is accompanied by gift-giving.

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[1] The figure for cooking in period I is an estimate, derived from averaging the figures for the following periods, since relevant records were not initially kept.

of individual circumstances rather than degrees of specialisation. While cash cropping households are clearly more active than the others, the substantially greater time they devote to the external sector accounts for the differential and they are no less active within the subsistence sector than their non-cash cropping counterparts. This is clearly demonstrated if household 12 is excluded from the calculations.

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Table 6:6

Sivepe: contrasting activity patterns of cash cropping and non-cash cropping households*
(hours per man-week)

	Subsistence sector		External sector		Total
	'productive'	'non-productive'	'productive'	'non-productive'	
Mean	26.7	3.4	2.5	7.5	40.1
Cash croppers	26.9	3.3	3.3	8.8	42.3
Non-cash croppers	26.7	3.5	1.2	4.9	36.3

* Household 12 excluded.

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The division of labour

(i) By sex. Although there is little variation in length of activity week between the sexes, the men distribute their time more evenly through a broader range than the women who tend to confine their attention to a few specific tasks (see Fig.6:7). Sixty-one per cent of the women's time is devoted to subsistence gardening and household tasks compared with only 29 per cent for the men; however, the latter give substantially more attention to clearing, other subsistence food production and other subsistence activities than the women (11.5, 10.9 and 8.6 per cent respectively compared with 6.7, 1.6 and 1.1 per cent) while retaining subsistence gardening as quantitatively the most important of their grouped activities. Consequently the broad allocation of time between subsistence and external, productive and non-productive activities does not differ substantially for the two sexes; the men spend 69.8 per cent of their time on productive activities and 70.3 per cent on subsistence and the women 76.3 per cent and 77.0 per cent respectively. Rather it is a matter of the women concerning themselves essentially with the daily routine of harvesting and preparing the staple foods for consumption while the men turn to the more irregular, and frequently more arduous tasks such as house construction, hunting and sago-making. In part, no doubt, this pattern reflects the formal authority structure in the household in that the men delegate responsibility for meeting routine needs to the women while they

[TEXT CONTINUED ON PAGE 101]

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

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Table 6:7

Rivers: the division of labour by sex

	Men	Women
Total hours active	13,934	15,041
Total weeks present	349.7	363.1
Mean activity week	39.8	41.4

Activity	Total hours	Percentage contribution*
Men		**Men**
Rubber - harvest	137.4	100
Recreation	194.7	97
Hunting	1,289.3	93
Preparation of tools and equipment	198.1	91
Church work	182.0	88
Construction	1,160.5	87
Coffee - market	77.9	85
Other crops - plant	41.8	84
Sago-making	319.7	81
Yams - plant	226.4	81
maintain	45.3	79
Purchasing	273.6	77
Taro - plant	1,714.9	75
Social obligations - other	732.7	73
Women		**Women**
Sweet potato/yam - market	51.2	100
Cooking	5,442.0	97
Sweet potato - harvest	900.2	92
Care of the sick	172.5	90
Taro - market	54.3	90
harvest	2,133.4	87
Washing	117.5	75
Both		**Men**
Rubber - market	36.1	66
Fencing	45.7	64
Coffee - harvest	353.1	62
Miscellaneous	260.6	62
Clearing	2,614.7	61
Coffee - maintain	74.5	60
Social obligations - marriage	32.7	60
visiting	873.9	56
Paid work	1,128.8	56
Other crops - harvest	1,109.0	54
Sick - personal	442.6	53
Yam - harvest	412.6	53
Coffee - process	398.4	53
Collecting firewood	234.1	52
Social obligations - mourning	783.9	51
Other crops - market	84.9	51
Church services	1,946.2	46
Meetings	898.7	44
Fishing	165.0	44
Council work	824.2	42
Taro - maintain	2,531.6	37

* Where one sex carries out more than two-thirds of the work and where the total amount exceeds .01 per cent (29.0 hours) of the total hours active for the whole sample.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

concern themselves with the prediction of future needs, or with the catastrophic aspects of the food cycle, and therefore with activities directed towards fulfilling these.

So, at the level of specific tasks, a clearer division of labour emerges, although even here there are few important activities exclusively the concern of one sex as Table 6:7 demonstrates. While subsistence gardening is largely the women's concern two tasks

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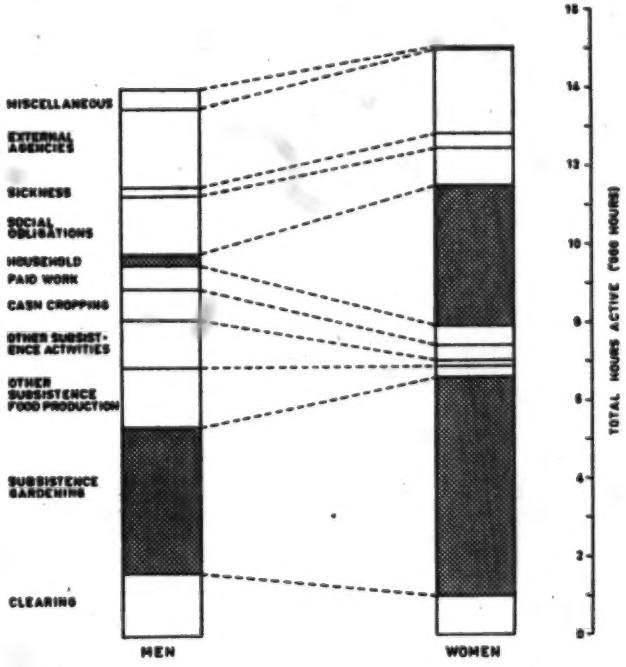
DISTRIBUTION OF TOTAL ACTIVITY TIME BY SEX FIGURE 6:7



predominate - the maintenance and harvesting of taro - which together account for 22.9 per cent of their activity time. Men do most planting of taro and are primarily concerned with the cultivation (including harvesting) of both yams and the minor crops. The labour of harvesting yams is shared with the women, although the men direct the operation since yams are a food crop of considerable social and economic importance, and are stored against future needs. Many of the minor crops are tree crops - areca, coconut, breadfruit, etc. - and the fact that men are more adept at harvesting them largely accounts for their greater involvement.

Clearing, although both arduous and designed to cater for long-term food requirements, is something of an anomaly in that only 61 per cent of the time expended is contributed by men. However, the women's role is subsidiary, the men being responsible only for the initial clearing and burning, and the women cleaning up the debris and piling it around tree stumps to burn again.

The fact that most marketing of subsistence crops is done by women may be viewed as a logical extension of their gardening activities. The few marketed by men - areca, tobacco, etc. - are considered male crops and a woman would not normally harvest them. But contrast, the marketing of cash crops is dominately a male concern, with the women contributing to the harvesting and processing of coffee on account of its very high labour requirements.

The single most time-consuming activity carried out by either sex is cooking, accounting for 22.1 per cent of the women's activity time. Ninety-seven per cent of all cooking is done by women, the only exceptions being the preparation of meat at feasts or for 'marketing'.

With the exception of parties which mainly attract the young men, both sexes are involved to much the same degree with social obligations and likewise there is little distinction according to sex in connection with the external agencies. Finally, care of the sick concerns women more than men only because it is they who take children to the infant welfare clinics.

(ii) By age. While there is not, strictly speaking, any division of labour according to age, there are significant variations in both the general level of activity and allocation of time. These patterns reflect both the customarily defined responsibilities of the several age groups and their diverging interests in the contact situation. Table 6:8 shows the oldest and youngest age groups to be the least active. The reasons for this need no elaboration. The limited involvement of young people in village life gives them time and opportunity for other pursuits: for the 15 to 24 years age group temporary absences accounted for 10.3 per cent of survey time and 6.5 hours per man-week were spent in paid work, but only 7.9 hours in subsistence gardening, the dominant activity of all other age groups.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

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Plate 5. Men are responsible for the initial clearing of a new garden site. Boys acquire the appropriate skills by assisting their elders.

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Plate 6. Women are responsible for the final preparation of the garden site prior to planting. Here, following an initial burn, the debris is being piled around the tree stumps and larger timbers to burn them a second time.

484 Sangara. Finally, movement directly related to the external agencies and sickness is proportionately greater than for all other activities apart from the two exceptions noted. In general, travelling times appear to reflect a significant expansion in the village oecumene following contact. Further, in those activities specifically related to this expansion there is a lower level of efficiency in so far as travelling is concerned, since there has been no parallel development in the modes of travel.

461 Detailed time and motion studies of a limited number of activities were conducted in order to acquire a better understanding of the utilisation of activity time in areas other than travelling and of the level of productivity within the framework of the existing economic system and technology. A total of 28 man-instances were surveyed, the activities comprising clearing, several subsistence gardening tasks, sago-making, house construction and coffee harvesting. The results are presented in Table 6:12. The main feature they demonstrate is that the various productive tasks (Main, Ancillary and Other) carried out within the duration of a single activity amount to only 49.3 per cent of the total time devoted to that activity; and 27.4 per cent of the total time is accounted for by resting and eating meals. The time spent in resting increases with the intensity of effort and exceeds 50 per cent in sago-making, productive effort being proportionately reduced. However, in this case the increased leisure time is compensated for by a large work group so that it is possible to maintain a high rate of sago production.

[462] While acknowledging the small number of observations, tentative patterns may be discerned within the sample according to sex, age and cash cropping status. Men concentrate more on the main task than women, as the latter also are responsible for preparing any food during the course of the work, washing the children and doing such minor tasks as foraging for greens; the 25 to 34 years age group allocates its time in a more productive manner than any of the others, spending 56.3 per cent on the main task and only 16.1 per cent on resting and meals; while cash croppers appear to use their activity time more productively than non-cash croppers. The cash croppers spend 64.9 per cent of activity time on the various productive tasks and only 17 per cent in leisure compared with 36.3 per cent and 36 per cent respectively for non-cash croppers. This clear distinction is in part a function of the frequency of sago-making by non-cash croppers, but if this activity is excluded the figures for cash croppers become 64.2 per cent and 15.5 per cent respectively, and for non-cash croppers 47.3 per cent and 23.9 per cent respectively; thus the distinction, if somewhat modified, persists. Furthermore, it must be recognised that some cash croppers at least, with their higher cash incomes, have less need to make sago during the dry season since they can supplement their diet with storebought foods.

Table 6:12

Sivopa: the allocation of time within activities.
A detailed analysis of twenty-eight occasions covering nineteen individuals and a breakdown according to age, sex and cash cropping status
(minutes and per cent)

			Travel	Rest and meals	Main task	Ancillary tasks	Other tasks	Cooking	Washing	Total
Whole sample	(28)*	Mean duration	42	72	102	15	14	17	3	265
		Per cent	15.8	27.4	38.5	5.7	5.1	6.3	1.2	100
SEX Males	(14)	Mean duration	41	74	118	26	12	-	-	271
		Per cent	15.1	27.4	43.5	9.5	4.3	-	0.1	99.9
SEX Females	(14)	Mean duration	42	70	85	4	15	33	6	255
		Per cent	16.5	27.4	33.2	1.6	5.9	13.0	2.4	100
Cash cropper	(16)	Mean duration	32	36	106	14	16	5	2	211
		Per cent	15.1	17.0	50.6	6.5	7.8	2.3	0.8	100.1
Non-cash cropper	(12)	Mean duration	55	121	96	17	10	33	6	338
		Per cent	16.4	36.0	28.4	5.0	2.9	9.7	1.6	100
AGE GROUP 15 to 24	(2)	Mean duration	21	181	49	12	-	126	28	417
		Per cent	5.0	43.5	11.7	2.9	-	30.2	6.8	100.1
AGE GROUP 25 to 34	(8)	Mean duration	24	29	101	1	12	10	3	180
		Per cent	13.4	16.1	56.3	0.6	6.6	5.3	1.7	100
AGE GROUP 35 to 44	(8)	Mean duration	33	53	132	36	1	6	-	261
		Per cent	12.6	20.3	50.7	13.8	-	2.2	-	99.6
AGE GROUP 45 to 54	(9)	Mean duration	72	69	99	10	31	10	1	292
		Per cent	24.5	23.6	34.0	3.5	10.6	3.6	-	99.8
AGE GROUP 55+	(1)	Mean duration	30	390	-	10	-	-	-	430
		Per cent	7.0	90.7	-	2.3	-	-	-	100

* Indicates number of man-instances observed.

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461 The analysis of work organisation within the framework of specific activities reveals that the essentially non-productive aspects of travel and leisure account for almost as much time as that devoted to productive tasks. Thus, while the activity day is reasonably long there is immediate scope for improving efficiency at this level, and the interest currently being shown in land tenure conversion among the Orokaiva, plus the distinctive time and motion patterns of the cash croppers and younger householders possibly reflect some realisation of this.

The nature and size of work groups

[181] Both Keesing (1952:19) and Reay (1953:111) have remarked upon the highly individualistic nature of the Orokaiva and this trait [592] is clearly reflected in their work patterns. The household, comprising a nuclear family, is the basic unit of production and consumption[1] yet seldom do all its members work together on a single task. The pattern is rather for individuals to perform distinct but mutually compatible tasks at the same location. In one such case, where the four adult members of a household spent a six-hour period together in the same garden, the following allocation of work and sequence was observed:

[462]

Husband and son - clearing bush
Wife and daughter - weeding taro
Wife - collecting taro tops (for planting)
Son - planting taro
Wife - collecting sweet potato (for consumption)
Husband - collecting yams (for consumption)

Likewise, members of an expanded family frequently travel together to and from their separate, but adjoining, gardens and perform similar tasks within their respective areas.

In Table 6:13 work groups are defined narrowly, in terms of individuals performing the same task together at the same site, [476] and as such they are normally seen to comprise less than two adults. The main exceptions are activities where collaboration is specifically

[1] Only 9 per cent of all activity time is rendered in the form of labour services to other households. Nevertheless, the daily distribution of food is an important facet of Orokaiva life, and its scale contradicts to some extent these individualistic notions, suggesting that communalism is reflected by exchange rather than co-operative effort. See Part III for an analysis of the exchange system.

[TEXT CONTINUED ON PAGE 115]

461 [476] required, in particular sago-making and house construction.[1] In the case of the former about eighty man-hours per day should be expended on a mature tree if the sago is to be produced before spoiling,[2] while in the latter assistance is specifically needed to erect the timber frame and put the roof in place.

Some social significance can probably be ascribed to other activities with a mean size of work group exceeding 2.0 persons. This applies particularly to the preparation of roofing sections and to fishing, both of which have an important recreational component either in the form of conversation or 'picnicking'. In the case of yams, where the mean size of work group is 2.3 persons, the tuber is considered harder to harvest than taro because it develops at a greater depth, and larger quantities are harvested at a single time for storage. However, as with sago-making, an important consideration in rendering assistance is undoubtedly that the service will be reciprocated either immediately or subsequently with a quantity of the foodstuff involved. Both are perceived as 'hard' work and the question of cost-benefit is therefore seriously considered in deciding whether to render assistance. The difficulty experienced in mobilising a sago-making work group when there is no widespread shortage of food is evidence of this.

[462] The large work groups associated with the marketing of the two main subsistence crops, taro and sweet potato (4.3 and 2.6 persons respectively), are to some extent misleading. In virtually all cases the marketing was done at Saiho by women, each selling her own produce. The approach to marketing these crops is very different from that of cash crops - one woman decides she will take some produce to Saiho and a number of others then decide, very much on impulse, to follow suit.

Relatively large work groups are associated with a number of cash cropping activities. This is particularly true of coffee,

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[1] In fact these activities comprise a number of distinct tasks and if we are to be consistent in our categorisation we should therefore speak of 'taro-producing' rather than isolate the several tasks involved. Then, given the type of work allocation and sequence described above, the work groups associated with taro-production approach those of sago-making and house construction. In spite of these apparent inconsistencies in the method of categorisation, the fact remains that taro-producing activities are not necessarily collaborative and they are distributed over an extended period, while collaboration is actively sought (and required) in the other cases and the activities are restricted to a much shorter time span.

[2] If a household decides to extract sago without outside assistance an immature tree is normally felled.

512 461 week of 45.8 hours. Likewise 68 per cent of the 18.7 hours spent in subsistence gardening is confined to taro cultivation and 70 per cent of the 13.0 hours on household tasks to cooking. Apart from clearing, in which women are responsible for 'sweeping' up the debris and much of the secondary burning, the time Olga devotes to the other productive subsistence activities is minimal.

Sixty-four per cent of the time spent on social obligations comprises visiting, an even greater proportion than for Gorukari although Olga did not change her place of residence at marriage.[1] One of her married daughters lives in a village about half an hour's walk away and, with her husband away in the police force in Port Moresby, there is a great deal of inter-visiting.

Although without cash crops of his own, Olga's husband worked some coffee belonging to their eldest son during the year, the son in turn confining his cash cropping to the rubber. [462] Olga assisted her husband largely in pulping and drying the parchment and in its subsequent marketing. However, her involvement with the external sector of the economy is largely confined to the external agencies, particularly the church. On account of her household responsibilities she is seldom away from the village for more than a night or two at a time, while the emphasis placed on subsistence activities (83 per cent of her total activity time) results in both her and Gorukari's spending more time on them than either Linton or Palminus, in spite of the latter having longer activity weeks. Finally Olga spends less time on non-productive tasks - only 21 per cent compared with 26 per cent in the case of the two men.

Rodney Gill. Rodney Gill is Gorukari's husband's brother and, at the age of 18 years, the eldest child still residing with his parents. While both parents are often disabled through sickness and rely on the support of Gorukari and her husband, Rodney Gill's behaviour pattern does not suggest any tendency to assume domestic responsibilities. With a mean activity week of 43.7 hours he spends only 48 per cent of his time in subsistence activities and 53 per cent in productive work. Typically, adolescent aspirations are directed to wage employment and many young men leave the village. Of the six males in the 15 to 19 age group at the beginning of the year, one joined DASF at Popondetta

[614]

1 She is a member of Arehu lineage, Jegase clan, and her husband a member of Berekipa lineage of the same clan. Intra-clan marriages are not uncommon, a contributing factor in this instance being that Olga is believed to be descended from a Togahau war captive (Rimoldi: personal communication).

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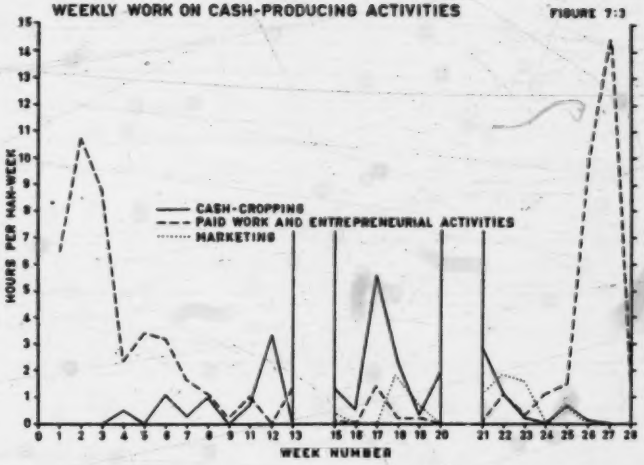
INONDA
WEEKLY WORK ON CASH-PRODUCING ACTIVITIES FIGURE 7:3



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The gathering of forest plants receives more attention during the dry season to compensate for lower garden production. The increased dietary significance of such plants at this time is, perhaps, understated in Table 7:3, since women often collect green leaves beside paths while walking to or from other activities and such gathering may not be recorded. In addition, a considerable amount is gathered by children. Hunting also increases during the dry season, with the increased number of wild pigs. However, a significant factor in 1964 was the acquisition of a shotgun in July by the leading man (with financial assistance from others, who thereby acquired rights of use). From this time, hunting to obtain meat for both food and marketing increased, becoming most popular during period III when marketing also was most frequent. Due to the drop in water levels, the time devoted to fishing during the dry season is much less than in the rest of the year, but over the year as a whole, more time is spent in it than in any other single activity.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

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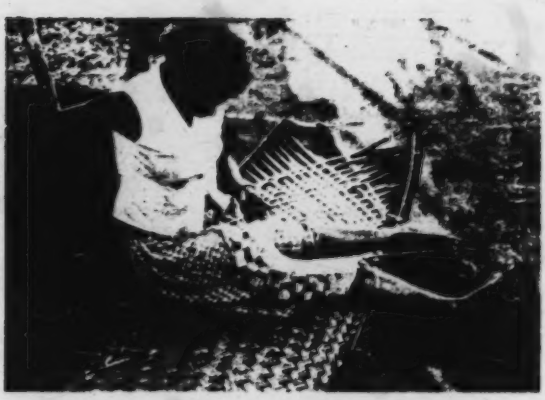

Plate 7. Women spend many hours making string bags.

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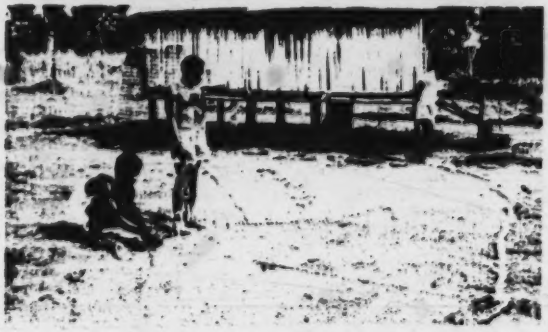

Plate 8. Men from Inonda and Hosou villages repairing a large fishing net preparatory to an all-night fishing expedition.

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(ii) Other subsistence activities. The other subsistence activities are construction of houses and other buildings and the preparation of tools and equipment such as spears, sleeping-mats and string bags. The latter activity occupies, on average, about 1.5 man-hours per week with no seasonal variation. Over one-third of this time is accounted for by women making string bags. More than one-quarter is spent, mostly by women, collecting and weaving pandanus leaves into mats and over one-tenth in sewing clothes. Men's tasks in this sphere include the making and repair of axe-handles, spears and fishing nets and the weaving of coconut-leaf baskets. House construction is carried out almost entirely by men, except for the preparation of roof-sheets from sago-palm leaves, in which women may assist, and it occupies about 2.0 man-hours a week. During periods I and II, several people were building houses on the new village site. For the most part, such activity was not intensive; some continued to live in the old village and from time to time worked on their new houses, while others built temporary houses on the new site and lived in these while erecting their permanent houses. Not all construction, however, was subsistence oriented. In July and early August the men spent 189.6 hours erecting the copra-drier and in period III the entrepreneur spent 3.2 hours on his new trade store. (Also in period III, 33.1 hours were spent building the chapel, but this was recorded as 'church work' and is included under 'external agencies' rather than 'construction'.) The amount of time shown as spent on construction of houses, garden shelters and the copra-drier is much higher than the time that would be spent on building in most years. This is due to the unusual circumstances during 1964 of the decision to build the copra-drier and the reconstruction of the village; normally, individuals might build new houses only once in five years. Thus, the annual rate of house-construction would be only about one-fifth of the 1964 rate.

[342]

The amount of time expended by individuals in household tasks - cooking, washing and collecting firewood - as shown in Table 7:3 - is understated. Owing to problems of observation during periods I and II when the village was on two sites, cooking was rarely recorded. As a rule, wives prepare two meals a day; breakfast requires 0.8 hours and the evening meal takes 1.5 hours on average. When a midday meal is prepared, the mean time taken is 1.0 hours. Thus, wives are likely to spend at least 2.3 hours a day in cooking, or 16.1 hours a week, and it is clear that cooking is the most time-consuming task for them. When the figures are calculated incorporating this average figure, the mean time spent by individuals on household tasks appears as 10.1 hours rather than 3.8 hours. (This does not include the important contribution made by children, particularly young girls, who, from the age of about five, fetch water and wash pots and, by the time they are about twelve, assist in preparing meals.)

[857]

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Table 7:4

Inonda: adjusted mean weekly activity over survey period
(Adjusted with additional data on household tasks)

Mean number of man-weeks	Hours per man-week	
	Household	Total
14.7	10.1	49.9

(b) The external sector

In total, subsistence activities, including household tasks as adjusted above and excluding construction oriented towards cash income, occupy 34.8 hours per person per week. Cash-producing activities - cash cropping, paid employment, entrepreneurial activities, marketing of game and construction of the copra-drier - together occupy 4.5 hours per person per week. Unlike most of the subsistence activities, not everyone engages in cash-producing activities. Some men did not obtain paid work during the survey period and there is only one man with the experience and confidence to operate as an entrepreneur. Women may assist husbands and kin in cash cropping and sell produce in the market on their own account but they do not engage in paid work (though some had, in the past, worked as domestic servants on a nearby plantation). However, taking the village data as a whole, an individual spends an average of 39.3 hours a week on productive activities in both the subsistence and the monetary sectors.

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(i) Cash cropping. The average time devoted to cash cropping is only 1.0 hours per man-week. Although the survey excluded much of the coffee harvesting and selling season, the figure would be only a little higher if these had been incorporated. Only one household harvested and processed coffee during the survey; if the other two households with mature trees had also done so at the same rate, the overall average time on cash cropping would be raised to 1.4 hours per man-week. The most intensive work was carried out on copra in the dry season, when harvesting and processing occupied a mean 1.3 hours per man-week over that period. Unfortunately, much of this time was wasted. When the drier was finished, it was decided that copra-making should be a communal project and the villagers spent a total of 82.6 hours, most of this in three days, collecting and splitting some 410 coconuts, laying out the flesh and maintaining a fire. On the fifth day, the fire was stoked with husks instead of wood and shells and the copra was spoiled by the thick smoke. The following week the women refused to assist the men for more than a few minutes, since their previous labour had been wasted. The men spent 10.8 hours harvesting more coconuts and assistance from the researchers saved them 1 hour in transporting

592 exchange network and they must use cash and storebought goods to
512 compensate for this.

[461] Few households differ greatly from the average in the amount of time they devote to household tasks. The widower, like most men, seldom cooked, whereas in household 18 the widow's son was rarely
[462] present and the mean weekly time spent in household tasks is strongly influenced by the time spent in cooking by the widow. Household 16 appears to spend less than the average time since it contains two men as well as the wife's mother, who does not cook as often as her daughter. The small amount of time spent by household 22 is probably due to the fact that the members had comparatively few clothes and so little time was spent in washing.

164 As mentioned, much of the time shown as spent in sickness involves visits to the aid post and particularly to the fortnightly infant welfare clinic. Households containing small children, then, appear to spend most time in sickness. When days, rather than hours of sickness (including periods spent outside the village at hospital or the aid post), are taken into account, it is the households containing people over 45 that are most often sick. Household 24 spends on average 1.3 days per man-week in sickness. In addition to regular fevers, the household head suffered an anal prolapse in August and he and his wife spent the last 19 days of period II at Saiho hospital. Households 18 and 19 have the next highest sickness rates. Household 16 also has a comparatively high rate, largely because of the presence of the wife's aged mother but also because the whole household was sick with influenza during most of the last two weeks of the survey. All of the other households spent less than half a day per week in sickness.

592 There is not much difference between households in the amount of
512 time spent on social obligations. The widow and the wife of the head of household 21 spend rather more time than others in visiting, while the entrepreneur's household, (23), and the widower do little, and the latter was also unable to attend two feasts on account of sickness.

592 In addition to differences in activity patterns between the in-
512 dividual households, certain distinctions appear between cash
461 cropping and non-cash cropping households as groups. As is to be expected, cash cropping households spend more time in planting and tending commercial trees. Non-cash cropping households spend only 0.2 hours per man-week in cash cropping, assisting others and working on the copra project, but even cash croppers spend an average of only 1.5 hours per week on their trees. The two categories devote a similar amount of time to paid work and entrepreneurial activities - primarily because the Jego'undi man's period of work on the settlement block was intensive enough to outweigh the effect of the older non-cash croppers, who did no paid work. On average, people in non-cash cropping households spend 3.5 hours more per

592 512 461 week than those in cash cropping households in subsistence gardening and also more time in clearing, even though one of the former was clearing a garden for coffee. This is largely the result of the efforts of the widow and widower and household 24 in assisting others, as described above. Balancing the greater amount of time spent by non-cash cropping households in productive subsistence activities, the cash cropping households spend more time in tasks concerned with the external agencies, particularly purchasing, in household tasks and in sickness and care of the sick. This last is without taking the separately-recorded days of sickness into account. [757] In fact, the non-cash croppers, being generally older, are more liable to prolonged periods of sickness and are also more reluctant to go to the aid post when sick - often instead using a stinging leaf known as irongo as a counter-irritant for a variety of ills. In addition, three wives of cash croppers attended the infant welfare clinic regularly but only one non-cash cropping woman had an infant child. Table 7:7 shows details of these separately-recorded days of sickness, including sickness during absences.

Table 7:7

Inonda: days spent in sickness per man-month

164

	Cash cropping households	Non-cash cropping households
Personal sickness:		
within village	0.8	1.5
outside of village	0.5	0.7
Care of sick:		
within village	0.1	-
outside of village	-	0.7
Total	1.4	2.9

592 512 461 Although the cash cropping households have, on average, a longer working week than others, it is clear that this is not due simply to time spent on their cash crops. It is noteworthy that non-cash cropping households, as well as spending a greater proportion of time in subsistence gardening, also dispose of slightly more garden produce per week than the cash cropping households, while the latter record a net inflow of garden produce and dispose of more store-bought foods (see Tables 11:8 and 11:9).

462 The division of labour: the influence of sex

Table 7:8 shows the division of labour between the sexes. As would be expected, men perform the major part of the heaviest tasks, including planting crops as well as clearing and fencing gardens,

[TEXT CONTINUED ON PAGE 147]

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Table 7:8

Inonda: the division of labour, by sex

	Men	Women
Total hours active	9,373	9,787
Total weeks present	200.4	181.0
Mean activity week	46.8	54.1

Activity	Percentage contribution*	Activity	Percentage contribution
	Men		
Clearing	74	Copra - market	100
Fencing	86	Other product - market	79
Sweet potato - plant	81	Purchasing	85
Yam - plant	89	Entrepreneurial activities	99
Minor crops - plant	77	Paid work	100
Coffee - plant	67	Hunting	97
Sweet potato - weed	69	Sago-making	79
Minor crops - weed	78	Construction	91
Coffee - maintain	75	Church work	75
Coconuts for copra - maintain	86	Sick - personal	81
process	70	Recreational	68
Coffee - process	77	Miscellaneous	70
	Women		
Taro - weed	69	Preparation of tools and equipment	76
Taro - harvest	94	Cooking	98
Sweet potato - harvest	83	Washing	73
Forest products - gather	68	Care of sick	83

Activities when contributions made by men and women fall within the range 34 to 66 per cent:

Taro - plant	Minor crops - harvest
Yam - weed	Fishing
Yam - harvest	Council work
Cocoa - maintain	Church services
Copra - harvest	Social obligations
	Collecting firewood

* Where one sex carries out more than two-thirds of the work.

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sago-making and constructing houses. They also perform most work on cash crops and tend to carry out the larger share of nearly all other activities related to the external agencies, with the exception of attendance at the infant welfare clinic, church services and council work. As well as predominating in the latter three activities, women do most weeding of taro, though not of other crops, and most harvesting of subsistence crops and the household chores. As a result of time spent in cooking, women tend to be active for at least one hour per day more than men.

Table 7:9

Inonda: the pattern of activity for each sex

Men	%	Women	%
Productive activities			
Fishing	10	Cooking	34
Clearing	9	Harvesting taro	8
Paid work	8	Weeding taro	6
Hunting	8	Fishing	5
Construction	8	Washing	4
Planting taro	5	Preparing tools and equipment	4
Sago-making	4	Harvesting minor crops	4
Fencing	3	Planting taro	4
Harvesting minor crops	3	Clearing	3
Entrepreneurial activities	3	Harvesting sweet potato	3
Weeding taro	3	Gathering	1
Purchasing	2	Sago-making	1
Preparing tools and equipment	1	Other	5
Planting minor crops	1		82
Marketing	1		
Planting sweet potato	1		
Maintaining coffee trees	1		
Other	8		
	79		
Non-productive activities			
Visiting	5	Miscellaneous ceremonies	4
Miscellaneous ceremonies	4	Visiting	3
Miscellaneous activities	3	Council work	3
Sick	2	Care of sick	3
Council work	2	Religious services	2
Religious services	2	Miscellaneous activities	1
Other	3	Other	2
	21		18
	100		100
Mean hours active per week	46.8		54.1

Table 7:9 shows the activities that consume most time of men and women separately, and of the nine most important activities for each sex, only fishing, planting taro and miscellaneous ceremonies appear for both men and women. Apart from planting taro and forest clearance, garden tasks account for a comparatively small proportion of men's time. The other food-producing activities have greater significance, with fishing, hunting and sago-making accounting for over one-fifth of the total time spent by men. It is striking that paid work is the third most important category of activity for men in general, even though the entrepreneur spent only a few hours and the widower no time at all in this way. Since five of the eleven men are in the youngest age group, this group's patterns have a marked influence on the pattern for men as a whole and largely account for the significance of fishing, visiting and miscellaneous ceremonies.

Garden tasks, particularly the maintenance and harvesting of taro, are much more important for women than for men. However, cooking is by far the most time-consuming activity for the former and the other main household chore, washing, is fifth in importance. Much of the time that women spend in fishing is with their husbands but they do fish alone - generally with small nets - while returning from the gardens. As described above, most of the time spent in preparing tools and equipment is for string bags and pandanus-leaf sleeping-mats.

There is no specialisation of labour according to age. The main apparent differences are that young people (under 25 years) tend to spend more time in non-productive activities such as visiting and miscellaneous social ceremonies, whereas those over 45 have a more restricted range of activities and devote a higher proportion of their time to gardening.

The weekly pattern of activities

As in Sivepe, there is a semi-official, ideal pattern of work allocation through the week. Monday and Tuesday are said to be for cash cropping, Wednesday for mission work, Thursday and Saturday for subsistence gardening, Friday for council work and Sunday for rest. Although this ideal does have some bearing on behaviour, the actual pattern is much less clearcut.

As Table 7:10 shows, clearing, fencing and cultivation of subsistence gardens take place throughout the week and only a slightly smaller amount of time is devoted to these activities on Sundays than on other days. Cash cropping receives most attention on Mondays and Tuesdays as in the ideal pattern, but it is still quantitatively much less than the attention given to subsistence gardening or to other food-producing activities. On these days cash cropping accounts for 5 per cent of total time spent, compared with 2 per cent over the week as a whole. Church work takes place

[TEXT CONTINUED ON PAGE 151]

512 criticised by her husband and by others, particularly when her husband's mother was sick at the aid post and he was left with no close relative to perform household tasks. Social obligations and other generally non-productive activities account for 33 per cent of the total time that Marjorie spends on her activities, compared with 20 per cent for the village as a whole, and the mean length of her working week was less than 42 hours compared with the village average of almost 49 hours. Apart from household tasks, the most important productive activity is harvesting of subsistence crops. Over half of this time is spent on taro and the rest on sweet potato, yams and minor crops. The other aspects of cultivation and clearing bring the total time on subsistence gardening to almost 11 hours [562] a week; only taro receives any maintenance. Fishing - usually with a small net, in [462] contrast with the spears used by men - is the most time-consuming of the other food-producing activities, although she also assists her husband in sago-making. Other subsistence activities are restricted almost entirely to making string bags and pandanus-leaf sleeping-mats.

The average weekly time Marjorie devoted to cash cropping equals that of the entrepreneur. She helped her husband establish a coffee garden and worked with the other villagers making copra. However, the time she spends in cash cropping is less than that spent in other activities related to external agencies. Of such activities, over one-third is on council work and almost one-third on meetings of the Hohota Women's Club; the rest is mostly on church services, since she often goes to the Ijika services held by close [461] kin of hers. In total, these activities and cash cropping account for 14 per cent of her activity time.

Although Marjorie invests sufficient time to maintain the household's gardens, it seems clear from the frequency of her contacts with her consanguineal kin in other villages and from the comparatively low proportion of her time devoted to productive labour that she is less oriented towards her village of residence than are the other wives, all but one of whom also originate from other villages.

Paulus. The younger of Mancho's two sons, Paulus is aged 25, is married to the sister of the leading man's wife and has two sons (a third having died a few months before the survey began). He was educated only to standard 1. Subsequently two and a half years were spent working as a surveyor's assistant in Port Moresby and some months as a labourer (and briefly as a foreman) on the roads near the village. He has no cash crop

512 [461] holdings - his father's coffee plantation of over 100 trees was given to the eldest son - but intends to plant both coconuts and coffee. He sees cultivation of cash crops as preferable to working away from the village since the former guarantee a continuing minimum income, but he believes that paid employment while resident in the village is the best source of cash. After the end of the survey Paulus, Lawrence and two others obtained work in Popondetta, returning home each night. Despite his lack of formal education and holdings of cash crops, Paulus is generally recognised as second in status to the leading man, and when the leader refused to be nominated for re-election as local government councillor, he was asked instead. He was prepared to stand, but eventually declined because of his wife's disapproval. When Lawrence proposed individual working of copra it was Paulus who insisted, successfully, that it should be communal, on the grounds that the others had insufficient palms to make individual working worthwhile. However, having gained his point, he was prepared to leave the sale of copra and the operation of the village savings account to the leader.

[461] On average, Paulus is active for more time per week than any other villager and over 82 per cent of his time is spent on directly productive tasks. He is recognised as the most accomplished hunter in the village as well as being skilled at fishing and, together with sago-making, these food-producing activities account for almost one-third of his activity time. He frequently borrows a shotgun from Lawrence or from kin living nearby and from [434] August onwards often took smoked meat or fish to market in Popondetta. As he has no cash crops his main sources of income are paid work, marketing and gambling, but only paid work consumes more than an average of one hour a week. Apart from the contract work, this includes work on the bridge over the Girua River during the first three weeks of the survey.

Although he spends more time on subsistence gardening than the cash croppers discussed above, Paulus spends much less in this work than the other non-cash croppers. Most time is spent in clearing and in planting and maintaining taro. He is one of the few with a significant number of yam vines, the crop occupying as much of his time as sweet potato [462] cultivation. As is usual for men, harvesting consumes little time, except for sugar-cane and coconuts.

The only other subsistence activity that accounts for a noteworthy proportion of Paulus' time is construction. Although much of this was, in fact, on the copra-drier, he spent

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orpkaiva QJ23

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The pattern of exchanges in relation to the sex and age of sample members

The nature of an individual's participation in the exchange system is directly related to his access to the appropriate goods and services. The criteria of sex and age have already been shown to have an important bearing on roles assumed in the productive system and, since the various goods and services can frequently be associated with specific activities, patterns of exchange are also influenced in this manner.

(i) By sex (see Table 10:13). Since most of the staple food, taro, circulates in a prepared form at the time of the evening meal, its distribution is largely the women's responsibility; so is breadfruit, which serves as a major substitute for taro during the dry season. The men consider their informal sharing of areca and lime to be of a similar nature and function in the exchange system. Thus, in the disposal of abundant subsistence goods, the pattern accords to that of the division of labour associated with them although, since most are in the form of individual exchanges, acquisitions are shared by both sexes. However, the exchange of 'scarce' goods is more strictly the concern of the men. This applies particularly to wild game, pig and to sago. Hunting is primarily a male pursuit, while the nature of the preceding negotiations and the scale and significance of the subsequent distributions of pigmeat and sago dictate that they be handled by the household heads.

The exchange of labour services can also be considered in terms of activity patterns, for subsistence activities featuring large work groups, and therefore requiring extra-household assistance, are male-dominated. Hence it is men who most commonly render assistance. Even in the harvesting of yams, where women do a lot of the work, the activity is organised by the male owner of the garden and therefore the service is offered to him.

The management of cash crops, particularly their marketing, is the men's responsibility, and any assistance in the processing of coffee is directed to them, although over half of it is actually provided by women. The pulping of coffee by hand, though labour intensive and a task of some urgency, is not nearly so arduous as the other major activities associated with the exchange of labour services, and this is the reason for soliciting assistance from women.

Cash transactions are primarily the responsibility of the men but the circulation of storebought goods is largely determined by the nature of their utility within the subsistence economy and the circumstances of their exchange. Thus tools and equipment are handled almost exclusively by men whereas prepared food, personal and household goods are distributed largely by women, although both sexes are involved in their acquisition (i.e. purchasing, receiving of parcels, etc.).

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Table 10:13

Sivepe: exchange of goods and services, by sex
(percentage distribution)

Category	Acquisition			Disposal		
	Men	Women	Total	Men	Women	Total
Subsistence produce: total	47	53	100	35	65	100
deviant items:*						
Taro	42	58	100	18	82	100
'Soup'	57	43	100	7	93	100
Sago	60	40	100	90	10	100
Breadfruit	28	72	100	10	90	100
Areca, lime, etc.	52	48	100	71	29	100
Pig (domestic)	95	5	100	94	6	100
Produce of hunting	79	21	100	72	28	100
Cash crops: total	-	-		100	-	100
Labour services: total	88	12	100	66	34	100
of which:						
Cash	92	8	100	46	54	100
Subsistence	88	12	100	70	30	100
Storebought goods: total	45	55	100	40	60	100
of which:						
Foodstuffs and stimulants	58	42	100	37	63	100
Personal	31	69	100	20	80	100
Household	52	48	100	-	100	100
Tools and equipment	90	10	100	83	17	100
Cash	73	27	100	70	30	100

	Men	Women	Total
Number of days surveyed	2,323	2,418	4,741
Percentage of total	49	51	100

* Items deviating significantly from the total for the category.

In effect, apart from transactions associated specifically with cash (and therefore including the marketing of cash crops), exchange patterns manifest a close association with the basic features of the organisation of production in relation to the sexes.

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(ii) By age. Table 10:14 outlines the percentage distribution of goods and services between five age categories and it also compares these distributions with the relative position of each category within the sample in terms of man-days observed. It demonstrates that, in general, the flow of goods and services is regulated by individuals within the 25 to 44 years age bracket, who are the most active within the sample and therefore, presumably,

[TEXT CONTINUED ON PAGE 212]

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The exchange of labour services

Table 11:15 presents the detailed composition of labour services given and received by the Inonda people. These services have been discussed in general,[1] particularly with reference to their seasonality. It is worth emphasising here the comparatively small extent of mutual collaboration in work. With some 17,000 working hours available (on the arbitrary basis of 6 man-hours for each of the 2,782 man-days on which exchange data were collected), less than 450 hours were actually spent in assisting others, either in or outside the village, although a few more hours were spent working together in communal tasks such as building the copra drier and chapel.

As was pointed out, 46 per cent of the acquisitions of labour assistance in subsistence tasks is in sago-making. There are two [222] main reasons for this. Firstly, it requires several days of intensive and exhausting labour in order to beat the starchy pith from the felled trunk before it spoils in the hot, moist climate and before wild pigs can get at the opened trunk at night. Secondly, a single tree provides enough food (supplemented by garden produce) to support several families for some weeks and the produce of a ● [462] single tree is distributed by the rightholder(s) particularly to those who assist in its preparation. Due to the exhausting nature of the task, men provide the bulk of the assistance. There is no clear pattern of kinship groups operating: assistance may be requested and received from the immediate family or from among patrilateral, matrilateral and affinal kin. Assistance received in sago-making exceeds disposals by 93.4 hours, reflecting an inflow from other villages. This was received mostly from two young Sewa men, who also contributed over one-third of the total assistance received in house construction.

Tasks involved in the construction of houses account for about 10 per cent of disposals and 15 per cent of acquisitions of all subsistence services. This is undoubtedly higher than it would otherwise be owing to the reconstruction of the village. Even so, the amount of assistance given in the process of re-building is probably understated, as much occurred outside the recording periods. The bulk of the construction services fell into periods [342] I and II and the move was completed by the beginning of period III. [824] One-third of the assistance in construction was in making roof-sheets from sago leaves.

About one-quarter of both acquisitions and disposals of subsistence services is in garden tasks - mainly fencing, clearing and planting taro. In most of these there is an excess of acquisitions,

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[1] See pp.235-44.

operations in the cash sector are conducted, in part at least, according to traditional attitudes.

Table 11:16 gives details of labour assistance received from and given to non-residents. We have already referred to the low degree of collaboration in labour practised by the Inonda people and this table shows that 40 per cent of all the services received is from non-residents - mainly young people invited by specific Inonda households to assist either in specific short-term tasks such as house-construction and sago-making or in general tasks such as gardening and household chores. Little is contributed by people from nearby villages compared with that given by those from more distant ones who come to live in Inonda for several days or weeks. The young men who came to assist household 23 also helped household 16 in sago-making. Most of the labour assistance given by households 16 and 17 is to non-residents, primarily to kin at Ijika and on the Girua settlement block, and it included work on garden clearance, hunting and maintenance of coffee and cocoa trees. Almost half of that in activities relating to the cash sector is given to non-residents, but less than one-sixth of subsistence sector services goes to non-residents.

Assistance by non-residents in sago-making accounts for 41 per cent of all services received from them and it forms one-fifth of all the labour invested in the task. Non-residents also account for 6 per cent of the total labour input in construction of houses, but their contribution in other tasks is quantitatively insignificant although it may be of considerable value as, for instance, in establishing a garden quickly to benefit from favourable weather conditions. Thus, households which have suitable kinship connections and are in a position to provide hospitality may derive considerable benefit by inviting young kinsmen to stay with them. A further implication is that the presence of young men who are not tied by material requirements to their village of origin means that there is, to some extent, a flexible reserve of labour which can be drawn upon at short notice by people over a considerable area.

The exchange of goods and services by sex

The breakdown of the totals for the whole survey according to sex reveals that women are responsible for the bulk of the transactions of subsistence items. Since they do much of the harvesting[1] and practically all the cooking, this is to be expected. Where items are exchanged uncooked, the men's proportion of disposals at least, tends to be higher than otherwise; this is so, for instance, with bananas, coconut, sugar-cane and areca and it may reflect a

[1] See pp.148-9.

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Table 11:17

Inonda: exchange of goods and services, by sex
(percentage distribution)

Category	Acquisition			Disposal		
	Men	Women	Total	Men	Women	Total
Subsistence produce:			(lbs)			(lbs)
Taro	40	60	5,494	6	94	6,307
Sweet potato	31	69	1,419	17	83	1,235
Yam	36	64	406	19	81	457
Banana	42	58	1,098	34	66	553
Pumpkin	21	79	521	16	84	410
'Soup'	70	30	261	3	97	266
Coconut	48	52	326	56	44	431
Sugar-cane	49	51	546	33	67	662
Areca	42	58	93	36	64	39
Other garden produce	44	56	1,566	26	74	1,089
Fish	49	51	174	71	29	211
Wallaby	81	19	318	85	15	276
Pig	77	23	1,482	85	15	1,923
Other produce of hunting, fishing and foraging	55	45	157	46	54	179
Other weight items	-	100	160	48	52	48
Labour services:			(hrs)			(hrs)
Cash	98	2	52.8	67	33	53.1
Subsistence	88	12	578.4	78	22	386.8
Storebought goods:			($)			($)
Rice	58	42	56.74	33	67	12.94
Tinned fish	67	33	29.98	54	46	6.16
Tinned meat	66	34	17.00	54	46	1.30
Bread	82	18	17.50	89	11	3.08
Sugar	75	25	17.84	100	-	1.62
Salt	48	52	1.24	-	100	0.12
Trade tobacco	71	29	21.24	45	55	2.26
Other foodstuffs and cigarettes	82	18	69.34	67	33	5.80
Clothing	60	40	77.04	55	45	6.70
Cooking utensils	21	79	9.76	-	-	-
Other storebought goods	88	12	42.60	14	86	0.78
Cash	88	12	337.36	90	10	340.70

	Men	Women	Total
Number of days surveyed	1,443	1,339	2,782
Percentage of total	52	48	100

438 462 greater sharing of refreshments by men when working or travelling together. Men are most prominent, however, in transactions of the produce of hunting and fishing, particularly wallaby, pig and fish. They engage in these activities more than women and a hunter will often give a whole pig or wallaby to a male relative, very rarely to a woman. The only instances recorded of gifts of carcasses to women were two young pigs caught in traps and a wallaby found dead (perhaps killed by a dog) on the roadway. As a rule, women are concerned in the distribution of meat only after an animal has been butchered. Women receive half the fish distributed, since young men returning from fishing expeditions almost invariably give part of the catch to close female relatives.

562 As men both earn and dispose of most of the money, it is to be expected that they acquire most of the storebought items - cooking utensils are the only significant exception, due to a single large purchase by one woman. Women are free to keep and dispose as they wish of cash acquired from gifts or in marketing (although they [439] acquire less than men in this way) and husbands also give their wives sums of money as presents or for specific purchases. Women account for a slightly larger share of disposals of some storebought goods, especially rice, reflecting the fact that in Inonda rice is becoming an accepted subsidiary food and may be included in the [556] routine daily exchanges of cooked food. This is true of flour also in the dry season. Rice is commonly prepared for visitors from other villages, perhaps to stress the wealth and 'modernity' of the Inonda people. As regards cash itself, most is handled by men.

437 462 562 Services are usually said to be given to household heads, so it is natural that most labour services are acquired by men. Those acquired expressly by women are largely in the form of garden and household tasks and house construction. Almost all the labour services relating to the cash sector are in cultivation of cash crops and, since women do not own commercial trees, are received by men, although the former do assist in their establishment and maintenance. In the subsistence sector, men own and control the exploitation of sago-palms and as sago-making accounts for 46 per cent of all assistance received in subsistence tasks, men are again dominant. They also provide most of the assistance in sago-making, and therefore account for the larger part of disposals of subsistence services.

The relationships between exchange and the socio-economic category of transacting partners

438 For each transaction, the name of the donor or recipient was recorded, together with his place of residence and occupational category - that is, whether he was a villager, a regular wage earner within the District, an ex-serviceman settler, or a wage earner resident outside the District. The categories are mutually

to Inonda men, and his three son-in-laws assisted him to make the garden, which covered an area of 2.32 acres.

Fencing: Wild pigs living in the nearby forest are always a menace to the food crops and the people erect fences and set traps to protect their gardens. The first panel of a fence is built where the people consider that pigs are most likely to enter the garden (usually the side facing the forest). Often, no further fencing is done until a pig enters the garden through an unfenced area. Then another panel may be built and this sequence is continued until the garden is almost pigproof. Natural barriers such as steep-sided creeks and large fallen trees are incorporated into the fences whenever possible. Households with neighbouring gardens often work at the same time (but independently) in order to reduce the amount of fencing required to surround the garden area.

All members of the household help with fencing but most of the heavy work is done by men. Straight green saplings about two inches in diameter are cut into stakes six feet long and thrust into the ground in pairs about nine inches apart with two feet between pairs. Logs of up to six inches in diameter are then either brought from the garden where they have been stacked after clearing, or are cut from the forest. They are piled horizontally between the pairs of stakes to a height of four to five feet, and the stakes are lashed together with wagesi vine to hold the logs in place. The warm moist climate causes fences to decay rapidly but they usually remain effective for about a year, by which time all but the latest-maturing garden products have been harvested.

Hunting, fishing and foraging: Inonda is more fortunate than many Orokaiva villages in that it has few people and extensive hunting lands. In fact the greater part of the total land area is used only for hunting and foraging. During the first month of our stay, ten wild pigs were speared or shot - a considerable quantity for a village of eight households. In addition, birds, bandicoots and other game were killed. One of the villagers owns a gun which he makes available to others and this has in all probability reduced the time spent in hunting and at the same time increased the product.

early on Sunday morning, but otherwise Saturday and Sunday are spent in much the same way as the other days of the week. Most people trim the grass and clear away any rubbish around their houses on Friday mornings. This is known as "council work" as it is made mandatory by a council by-law. It takes only an hour or two and not all villagers do these chores at this time.

Although there is some seasonal rhythm in subsistence activities, it does not seem to be very great, and relatively few other activities are affected by seasonal variations. The obligations associated with death, marriage and ceremonial activities seem to have a much greater effect on the patterns of work.

House-building, hunting and bush-clearing are primarily the province of men. Women's work includes weeding, harvesting, and domestic chores. Both sexes co-operate in planting, collecting firewood, stacking and burning dead wood, and foraging for wild foods. Men appear to work jointly with their wives much more in the cash crop gardens than they do in the food gardens.

A brief survey of patterns of work was undertaken for a period of six weeks (from 2nd July to 12th August 1962). Such a short study cannot give any indication of seasonal variations, nor can it be considered as necessarily representative of the year as a whole. In fact, owing to the death of one of the village elders during our stay, a considerable amount of time was spent in mourning and attendant social obligations. But since the beginning of 1959 there have been an average of two deaths per year in the village, and when one considers that the villagers are also involved in deaths of relatives in other villages, in marriages both here and elsewhere, in feasts, church celebrations and other commitments, the amount of time spent in social obligations during this period may not have been unduly out of proportion. The survey was undertaken as a pilot project only, on the basis of which it is proposed to organize a much deeper study of time patterns among the Orokaiva over a

The following rough assessment of total days expended on various tasks per year has been made.

Subsistence	Assessed man-days per year (adults only) Men	Women	Average
Bush clearing: 1.1 acres per adult male. We assume that men take about 10 man-days to clear an acre, and are assisted by their womenfolk during 4 man-days.	10	4	7
Planting: 0.5 acres per adult per year shared roughly equally by men and women assuming 8 man-days per acre of planting.	4	4	4
Weeding, maintenance and harvesting: 25% above pilot survey for although during that time harvesting was increased, weeding was reduced due to funerary commitments.	19	109	64
Fencing: One household of 6 adults (incl. 2 visitors) and 2 children erected 239 ft. of fence in 6 hours. Another household of 3 adults built 145 ft. in 8½ hours. This suggests that an adult, as a member of a team, can construct approx. 50 ft. of fence per day. There is a total of 7,148 ft. of intact pig-fence around the food gardens which was constructed during the 12 months preceding our survey. On the average therefore each household makes about 900 ft. of fence per year, which would require approximately 18 man-days per household, or about 7 days work per adult per year.(1)	7	7	7

(1) Wild pigs are most prevalent in the areas which border the Hydrographers Range. In the central parts of the Orokaiva country there are few wild pigs and the people do not build fences. This saves them time but, on the other hand, they cannot supplement their diet with fresh meat to the extent that the "border" people can.

	Men	Women	Average
Hunting, fishing and foraging: Taken as 25% below pilot survey (as hunting increased during mourning and fishing increased during dry season; foraging not fully accounted for as often done in the course of other activities). Hunting all by men, fishing mostly by men, foraging mostly by women	30	8	19
Housebuilding: House rebuilt about every 4 years. Assuming that it takes about 16 man-days to build a house.	4	-	2
Total subsistence activities:	74	132	103
Cash cropping: Assessed time needed to maintain and harvest area planted (1.85 acres) averaged over all adults.	6	6	6
Council work: Road work say 4 days per man per year.	4	-	2
Church: Services 2 hours per week, plus church celebrations 2 days per year.	17	17	17
Sickness (including caring for the sick): Based on survey period.	23	29	26
Paid work: Based on actual paid work undertaken so far this year.	72	-	36
Total other activities:	122	52	87
Social obligations			
Death: Based on 2 deaths per year in this village, each involving the equivalent of 10 days absence from productive activities; and 5 deaths elsewhere which concern Inonda people involving 3 days each.	35	35	35

	Men	Women	Average
Marriage: Based on one marriage in the village or elsewhere involving 3 days each.	3	3	3
Travel: (Mostly to visit relatives in relation to life crises). Based on survey period.	25	27	26
Other: Christenings, feasts, mothers' clubs, school openings, etc.	18	18	18
Total social obligations: (This is 40% less than the survey period).	81	83	82
Summary			
Subsistence activities	74	132	103
Cash cropping	6	6	6
Paid work	72	-	36
	152	138	145
Council work, church activities, sickness etc.	44	46	45
Social obligations	81	83	82
	277	267	272
Days remaining per year	88	98	93

No account has been taken of time spent in leisure or housekeeping activities.

463 Seniority of birth. This seemed to be of positive significance
472 for entrepreneurs who based their operations on cash-cropping (Crocombe 1967:5). It may possibly be of negative significance for traders. Three of the four first-born sons fall into the least successful category and the fourth into the middle category.

[462] Sex. All those in the sample are men with the exception of L, who is the most successful of all. Her elder brothers were killed in the Mt Lamington eruption and she says she is regarded by her father as a son in many respects.

[614] Traditional leadership roles. The only position of traditional
[571] leadership recognised today is that of sub-clan head. Only one of the entrepreneurs in the sample (E) was a sub-clan head, one was the son of a sub-clan head and in other cases the relationship was more distant. As most sub-clans contain only about two to ten men, sub-clan leadership seems clearly to give no advantage in trading. It may possibly be an inhibiting factor but we have no evidence on this point.

463 Non-traditional leadership roles. It is to be expected that
472 Orokaiva entrepreneurs will hold responsible and respected posi-
571 tions in their community. The table below shows a positive
621 correlation between entrepreneurial activity and elective community leadership roles. Seven of the twelve subjects hold such leadership roles. A local government councillor represents over 200 people (and one is president of a council serving about 10,000 people). The co-operative chairmen are elected by some hundreds of people and a church councillor represents about a hundred people.

Table 6

Elected positions of responsibility in the community

Elected position of responsibility	A	B	C	D	E	F	G	H	I	J*	K	L
Local government councillor	'	'			'		'		'			'
Church councillor					'	'						
Chairman of Co-operative					'		'					
President of Women's Club												'
Total	1	1	-	-	3	1	2	-	1	-	-	2

* J has been invited to become chairman of the local co-operative store which he helped to establish.

Subject E, the only clan head in the sample, holds important elective posts as local government councillor, church president, and chairman of a co-operative society. He had also previously held paid positions carrying responsibility and authority and requiring initiative.

657 423 man since tenure conversion was introduced. It suggests that in situations of stress, as when sorcery is feared, traditional tenure patterns may take precedence over the newly introduced system.

Several people mentioned that they will in future share the proceeds from their rubber with non-blockholding kinsmen, but most said they would not.

Inheritance of converted land

657 423 428 [178] In law blockholders may depart from the traditional pattern of inheritance when disposing of their land. As far as could be ascertained, most of the Ombi-Tara people wish to continue the traditional Orokaiva inheritance pattern, under which the first son generally has some precedence. The first son is not, however, the sole owner but rather the nominal trustee of the land for all sons. If the landowner has no sons, his daughters may keep the land in trust for their sons and in some cases the daughter's husband may also acquire some rights.

Several people intend to pass their blocks to the first son only and expect any other sons either to take up another block on what is now clan land, or to gain wage employment in an urban area.

Work organisation

657 423 182 512 The time spent in Ombi was too short to enable any conclusions to be drawn about the effects of conversion on work organisation, but a few general points may be made. There was no set routine in the sense of particular days being set aside for particular kinds of work. A number of people reported that Wednesdays and Fridays are set aside for Mission and Council work when required. During our stay no Mission work was done and Council work was done only on the first Friday, when most of the men went to a village two miles away to cut the grass around the Administration school, due to open the following week. Gambling occupied many people for much of Saturday and Sunday but others carried out normal work in the gardens on these days.

657 423 182 Husbands and wives worked together on food and cash crops, but I am unable to estimate whether husbands work more on cash crops and wives more on food crops as has been observed at times elsewhere.

[462] Five men were employed on maintenance work on the Popondetta-Kokoda road near Ombi for the full period of our stay, receiving [464] $6.42 a fortnight. The need for cash to pay the Council tax and [465] the Mission jubilee contribution led five others to work on road maintenance during the final week of our stay. Although working a thirty to forty hour week, the five longer term roadworkers have planted an average of 410 rubber seedlings each which is greater than the average of 346 seedlings for all Ombi-Tara blockholders.

241 is maintained today because, the Yega say,
423 it makes the work lighter if you have someone
613 to gossip with, and to share a watermelon or a smoke during rest breaks. The effect is that, at any one time, many people of a sub-clan are using land to which they do not hold cultivation rights.

241 The granting of temporary rights to plant
423 a food crop is normal procedure. A right-
[602] holder frequently grants such rights to affinal
[614] kin of a different clan or even to an affinal kinsman from a neighbouring parish. An outsider granted such a right would *never* consider that he had any permanent right to Yega
[431] land. He would simply give the right-holder a
[426] gift or, if asked, would lend land in return.

224 The Yega are coastal people and expert
[462] fishermen. Fishing is an exclusively male occupation and fish have always been an important food. Eleven reefs are known by
224 the Yega to exist off their strip of coast; rights
423 to fish over these reefs are held by the clans
614 whose ancestors first discovered them. Any person who catches fish over a reef belonging
[431] to another clan must give a gift from his catch to the right-holders. Fish are caught by many different methods but the commonest nowa-
[177] days is by skin-diving with a home-made spear gun and goggles made in Hong Kong.

SUBSISTENCE GARDENING

241 The Yega gardening routine is similar to the general procedure described earlier. The main features are universal inter-planting of a wide range of food plants and a shifting-field system which provides a continuous supply of fresh vegetable food. Some special features of Yega agriculture are worth noting. These are:

241 a) *The shifting-field cycle.* The average
242 length of the fallow period for twenty-one swiddens investigated was 7·4 years. Such a figure is apt to be misleading. It tends to give the impression that New Guineans are much more organized than in fact they are. Some swiddens were fallowed for as little as two years . . . 'because my brother made his garden over there and I wanted to work near him!', while others had been left as long as thirteen years . . . 'because the soil isn't very good in this place.' Human factors as well as physical

18: Dakeyne K-5 (1962-1964) 1969
OJ23 Orokaiva OJ23
Yega

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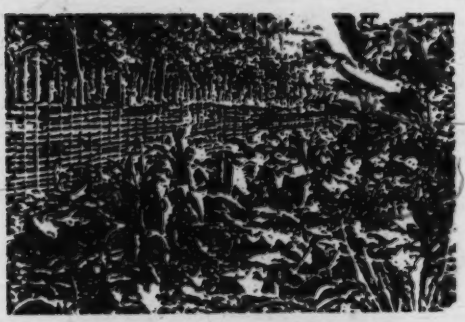

Fig. 6. A Yega swidden. Notice the variety of interplanted crops which here include maize, taro, sugar cane, pineapple, paw paw, and bananas. The fence, built to keep out wild pigs, is about five feet high

241 b) *Fencing.* Most Yega swiddens are fenced, at least partly, against the depredations of wild pigs (Fig. 6). Since fencing is a tedious task, natural features such as steep creek banks are utilized as fully as possible. But frequently one finds a swidden entirely fenced except for a gap left purposely to tempt the pig to enter the garden. A trap is then set, or a hunter takes his stand nearby at night. When the gap is not being used for hunting purposes, a fire is lit or pieces of rag are hung there; pigs scenting human beings will not then enter the garden.

[224]
[825]

241 c) *Division of labour.* Most garden work is performed by both men and women, but cutting large trees is men's work only, and harvesting is performed by women only. Incidentally, the women also carry the loads of vegetables weighing sixty to seventy pounds back to the villages, often three or four miles, sometimes with a load of firewood and a baby on top.

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[482]

262 d) *Sago production.* Sago is an important supplementary food; it is particularly important as a famine reserve. During an unusually long dry period in 1965 the Yega and their neighbours were reduced to living, for some months, almost exclusively on sago. Production is a tedious process. Sago is a starch which, with fibre, makes up the internal bulk of the

222

[P.9-B]

657 Kumusi Division in which both Sivepe and Inonda are situated. It
364 would be wrong, however, to imagine that the tidiness which will strike a modern visitor to Orokaiva villages may really be ascribed to resident magistrates and patrol officers. Col. Kenneth McKay who visited these villages in 1906 reported that he saw village grounds absolutely bare of grass, being swept so clean that a man might literally eat his dinner off it (quoted in Monckton, 1922: [462] 131-132). The sweeping of village grounds as a feminine duty is, indeed, already a subject of Orokaiva mythology.

364 Beaver, in the report already cited, sets out his concept
361 of village improvement as follows: "In the old days, doubtless, the people were careful enough not to leave food refuse about the village for fear of sorcery, but a good cleared space around the outskirts of the settlement was beyond them. There is certainly a danger that in maintaining this cleared area the people may be tempted to build their houses closer together, but I have not yet found this tendency." (1916: 49). Today, this cleared space around the outskirts is very sparing, though the privies that have become customary tend to be a few yards behind the houses and clearance extends just beyond them. There have, however, been interesting changes in housing architecture, to which I shall refer in due course. One significant change in the village "eco-system" has been the gradual elimination of the pig complex.

342 The Pre-contact house was invariably built with a pig
231 enclosure so that man and pig spent the night together. The
657 Australians lost no time in imposing the taboos of their own society: they did not object to human symbiosis with dogs; they even encouraged symbiosis with fowls but regarded symbiosis with pigs as the height of barbarism. The new house designs made no provision for them, so that they were left free to sleep under
231 the houses, or elsewhere, as they wished. Since the Local
657 Government Council was established in 1956, a vigorous campaign was conducted to eliminate them altogether. Thus, Inonda had no pigs in 1966, except for one which belonged to a Seva man who had left it with an Inonda man "to look after," and a very little one that had just been caught in the bush. When the new Sivepe was established in 1965, it was decided that this would be a pigless village; the remaining pigs were left in the old village. In practise, they wandered through the surrounding bush and gardens, so that it became useful to shoot them all as quickly as possible. Other villages, however, had not progressed so far in the direction of the pigless village ideal. Hohorita was indeed nearly pigless when I visited, but this was perhaps because a feast had been held there very recently.

659 Belshaw makes the following remarks about village development:
361 "Before the eruption, a new type of village had been established in the Kokoda sub-district, consisting of a large village square of neatly clipped grass, with houses arranged in a single row along

yet been completed (which was true) and that these ought to have priority. The women then became impatient; after which they explained to me that the women had talked to them insolently and they had told them to build the house themselves (which was a male task; it would have been unthinkable that women would have dared to do it). The same men devoted most of the following two months on building the mission hospital, so that their explanation did not hold water. The most likely explanation is that the men felt disinclined to build a clubhouse that was clearly going to be a source of conflict between themselves, the mission and other villages, such as Sasembata. They probably stopped work mainly in order to see whether the conflict would blow over and when their own women started to importune them, lost no time in withdrawing. I base this explanation more on attitudes observed at the time than on explicit informants' statements which were very guarded at this early stage of my research. (All this happened in our first month in Sivepe.) Basketball and meetings meanwhile continued at Sivepe, and sewing continued quietly at the pastor's house. The club was busy making uniforms for the basketball team. The next stage of the transactions between the station and Sivepe was much more subtle.

About three months before our departure from Sivepe, a mission teacher told me that his wife intended to teach Sivepe women a coastal women's initiation dance called the kere. This, he suggested, would be in our honour. My wife at once expressed much interest in joining in this dance. Nothing happened, of course, during lent but on April 1, the first week after Easter, the village fell dead silent early in the evening, everyone pretended to go to bed, the women slunk away somewhere and late at night all the women appeared dressed in white tapa cloths and tarpaulins, clearly impersonating spirits and performing a vigorous but most eerie dance, while all the men at first stayed indoors and the village remained otherwise in total silence. I even heard a flute, a highly sacred instrument which everybody continued to pretend was never played. The next evening the same performance was repeated; I then heard in conversations not intended for my ears that these dancers were the embahi (spirits). On the third day it was intimated to my wife that she might join. The "practises" (as they were now called) continued, though my wife never actually heard the flutes when she was dancing. After more than two months of almost daily practise, the kere was performed in public at the mission station, its character having been gradually transformed from a rite into a dramatic representation. Nonetheless, a careful observer could see elements of initiation ritual at all stages.

At all these practises, the mission teacher sat and watched at the centre of the stage. His wife played the role of the teacher; later, she asked an older woman, an expert from her natal village, to take over the leadership. The clearest sign of the continuing status battle was in the unending arguments on where the practises were to be held. Sivepe insisted they should be in the village but the station

affairs, but gives all his declining energies to his garden, keeping as close as possible to the productive level of his better years. He draws closer and closer to his garden where his spirit will dwell after death. Apart from the garden, he becomes remote from most things; his days of household duties, hunting, fishing, building are over. He will, however, make dancing ornaments and weapons and headdresses which again lie close to the spirit realm. (I have quoted Waddell's statistical evidence for these tendencies in Table 18.)[A]

How did culture change influence the division of labour between the sexes? For the traditional productive activities, there has probably been hardly any change. I have quoted a table of exclusively masculine and feminine activities collected by Williams in 1923, and hitherto unpublished (Table 19).[B] Certain tasks of importance were omitted from this list, which may explain why Williams did not publish it. Sago making was probably always a male activity; so was the use of the digging stick preparatory to planting taro and yam. The harvesting of taro was probably always a specifically feminine task; there is clearly a taboo on men against harvesting taro. Even bachelors never do it but must leave it to his mother, his sister or his brother's wife. If men did it, I was told, they would not "know how" and they would never manage to eke out the crop until the next harvest. This did not apply to the harvesting of other crops. When Williams classified "planting" as a feminine task, he was probably thinking of the actual placing of the cuttings in the ground, though I have seen men as well as women do this.

In the Orokaiva view both man and woman are repositories of capacities and resources specific to themselves; the relationship between man and woman is the giving of exchange (wine ari) of the contributions of each. Man views woman as an equal exchange partner and this equality is real even though the care over legal and political matters is a distinctively masculine contribution. In the new activities introduced since European contact the same balance is preserved. Some new duties (e.g., the washing of clothes) were added to the specifically feminine preserve, church work and the purchasing of goods became a predominantly masculine preserve (as is attested by Waddell's statistics). The harvesting of rubber, taught exclusively to men on the plantations, became an exclusively male activity. On the other hand, the bulk of cash producing activities (working for pay, maintaining, harvesting and processing of coffee) were shared.

One interesting observation made by Waddell and confirmed by me is that most marketing of subsistence crops is done by the women whereas marketing of coffee is done by the men. The handling of harvested crops is normally a woman's prerogative. These are normally carried in large string bags which only married women can own and hang over their heads. While the casual European observer supposes that the women carrying these large bags are reduced to the status of beasts of burden, these bags signify the women's exlusive power over the crop; the fuller they are, the prouder the women are of them. Thus, only

A,B [See Cat. 116, pp. 225, 226, respectively--Analyst]

462 women can carry produce to market. Coffee, however, is in a different [562] category because the bags are of a special type, supplied by the coffee [422] factory and a specifically male property.

Section 3: Education, Occupational Skills, Money Income

241 In the last section, dealing with the division of labour, I
613 did not introduce the question whether there were differences in this
614 respect between the various social groups--lineages and clans. The main differentiation noted by earlier authors was that between cash-croppers and those engaging only in subsistence gardening. Now in this respect there was no noticeable difference between clans in Sivepe: out of 1,100 coffee trees growing in Sivepe in 1962, 503 belonged to Jegase and Tisumu and the rest to Seho, while in Inonda the coffee growers belonged to two Andiriha lineages. In Sivepe today most men grow coffee, and this applies equally to the Jegase, Seho and Sorovi clans; the exceptions are elderly people. There are, however, very significant differences in other respects between socio-economic patterns in the Jegase and Seho clans--differences which are obvious even on very superficial inquiry.

614 A minor imbalance in the age distribution of the two clans is
561 noticed at once from the statistics: the Jegase householders are predominantly in the 35-45 year age group whereas Seho is predominantly [538] a little older (45-55 years). Hence the dance group formed in Sivepe is at present almost wholly composed of men of the Jegase clan. The [177] age difference happens to be very significant in various indices of [871] acculturation, as the first school was established at Sasembata in 1945, and the custom of looking for wage labour outside the district [167] did not become widespread until about the same time. While some Jegase people know some English, none of the Seho people over 35 speak any [191] at all. Furthermore, the first village constable and the first councillor in Sivepe were both Jegase men who had taken up employment well before the second world war. During the years they held these posts (1939-1965), Seho had much less contact with government.

614 The statistics (Table 20) show that Jegase male adults have
463 slightly more school education than Seho adults but a great deal more occupational experience. This experience, for both clans, did not include work requiring much formal training; it was labour on rubber and cocoa plantations, on the roads, assistance with land surveys, [199] laundry work, service as a "houseboy," and in the A.P.C. Nonetheless, an intelligent man thrown into these kinds of situation can find out a good deal about the outside world; in later dealings with external agencies, he is able to make more informed judgments. A further opportunity for such experience was offered the Jegase clan when the Australian National University, which made Sivepe into a sample village for several studies (see below, Chapter VII), decided to concentrate

A [See Cat. 116, p. 227--Analyst]

TABLE 19

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DIVISION OF LABOUR BETWEEN THE SEXES
AMONG THE OROKAIVA IN 1923

Source: F. E. Williams Papers W.5, dated Wasida 5.10.23

Women

Planting and small cleaning in Garden
Fishing for small fish
Cooking
Cleaning house and surroundings
Pottery
Bark cloth and painting of same
Look after pigs and dogs
String bags
Mourning vests of Job's tears
Mourning neck ornaments, of Job's tears
Armlets of Job's tears
Make shell and string belts

Men

Clearing of gardens
Hunting
Large fishing
Building
Make spears
Make clubs
Make cane belts
Make woven armlets and leglets
Make shell and string belts
Make wooden bowls

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Day's work of woman

(Ejiro of Borugata)
Sometimes in garden . . . sometimes in village . . . but more often than not goes to the garden
Going in the morning she will clean . . . plant. . . dig up taro . . .
In afternoon she collects firewood . . . water (in a gourd, scooping it in with a folded leaf), . . . taro etc. in her string bag (eti) and return "at four o'clock".
Then she cooks for husband and children . . . after that kaikais betel and stops nothing

26: Schwimmer E-5 (1966-1970) 1974
OJ23 Orokaiva OJ23

do look like a girl's breasts; they are very dangerous if one falls upon them with any force. His sister was clearly an *embavo*, a coconut spirit. In this way the deaths are, to Orokaiva thought, adequately accounted for.

The hero explains two types of ritual uses of coconut and areca, namely, those related to mortuary feasts and those where the sex of the recipient of the nuts is opposite to that of the donor. The instruction that nobody should eat the nuts lying under the trees, on pain of death, constitutes a mythological charter for the taboo placed upon the coco palms and areca palms owned by a person recently dead. An informant explained a further implication to me, which is not very clear from the version I quoted, namely, that it is customary to place coconuts and areca nuts upon the grave of a dead affine. Thus it was the duty of the hero to place coconuts and areca nuts upon the grave of his brother-in-law; and the duty of his wife, to do the same for the grave of her sister-in-law. In order to clarify these points, the myth tells of the wife's desire to eat the nuts and the hero's refusal to let her have them.

In a somewhat elliptic manner, the hero lists or implies three sets of rules concerning gifts of coconut and areca, where the sex of the recipient of the nuts is opposite to that of the donor. The sets are:

Areca	*Coconut*
1a. The man fetches the nuts from the tree.	1b. The woman *helps to fetch* the nuts from the tree.
2a. The man gives the nuts to the woman.	2b. The woman cooks the nuts for the man.
3a. The girl offers nuts to her lover and carries an offering of nuts at initiation.	3b. At a girl's initiation, a man prepares coconut oil, which is used as a ritual cosmetic.

The first opposition is made quite explicit in the hero's speech, but is not free from casuistry. Men usually fetch not only areca but also coconuts from the high palms on which they

26: Schwimmer E-5 (1966-1970) 1974
OJ23 Orokaiva OJ23

grow. The woman may help by collecting coconuts once they have dropped on the ground and by carrying them home. Very often, however, the coconuts are carried by men, who tie two nuts to a stalk, thus creating a huge effigy of a phallus. The feeble empirical basis of this opposition only serves to emphasize that we are here being taught an ideology which requires the opposition.

The hero's second opposition centers on the culinary use made of the nuts. Areca has no place in the kitchen, in opposition to coconut. The fact that coconut is also often eaten raw would weaken the opposition but is suppressed. The third opposition is in fact the strongest, but it is stated in a rather elliptical manner. We are told that in ritual girls give areca to men, but the opposite statement is omitted, viz., that in the same initiatory context *men* (but never women) pour coconut oil over girls.

In the narrator's mind all these oppositions are probably subordinate to a philosophical question: why the Orokaiva consider coconut masculine, areca feminine. Numerous informants have confirmed this classification in conversations with me. In this story, however, it is not presented as a "fact," but it is deduced in a logical manner. The words used make it clear that we have to do with a logical deduction:

> *Ainge* embo amina ainge ena. Embo amina *ainge eto*, erevi u ra embo erevi u ra; te sa erevi meni kakara ra;—*ainge eto* ikena.

This passage, translated above, contains the notion of logical entailment three times: *because* the girl gives coconut to the man, it *therefore* belongs to the man; *because* coconut belongs to a man, *therefore* coconut is masculine; *because* areca is a girl, girls give areca. The problem, for those who do not know Orokaiva culture, is that every one of the conclusions appears to lack logical force. Furthermore, it will be noticed that, from a formal viewpoint, the narrator's argument proceeds quite differently for men and for girls. This difference also needs explanation.

26: Schwimmer E-5 (1966-1970) 1974
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The story tells in more detail than is relevant here how the sister learned what had happened, how a magician from the neighboring mountain district of Managalase brought the brother back to life by giving him the heart and intestines of a wallaby, how this man married his sister and how the young man killed his father when the latter returned to complete his meal. He cut the father into many pieces, which were shared out among men whose descendants became the various language groups of the northern district, and multiplied exceedingly.

The informant who told me the myth suggested that its subject was the origin of taro cultivation. The whole text is deliberately ambiguous. When we are told of the woman giving [243] birth to a child, we must think simultaneously of her harvesting a taro—and we must remember that among the Orokaiva only [462]* women are considered *capable* of harvesting taro. When the woman is told to cut the child's head off, the narrator is thinking simultaneously of harvested taro, which is considered to be still alive until the top is severed from the rhizome. Again, the woman's method of concealing her children is modeled on the treatment given to taro shoots (*bere*) when they are planted. The word *bivese*, in particular, denoting the heap of weeds with which the children are covered, is a gardening term.

The apparent lies used by the woman to hide her activities from her husband are truths if her statements are taken symbolically. For instance, the reference to "throwing the child into the water" calls to mind that the origin of taro in many myths is linked to the water and that the rainy season is metaphorically linked to the fostering of a child in the womb.

The true nature of Totoima, though familiar to every Orokaiva, is not explicitly set out in the myth presented here. In other tales he has tusks which he wears when he kills people, but which he lays aside when he goes to sleep. He is killed by his son after his tusks have been removed from his bed. I shall return to this theme in a later section of this essay. Meanwhile, we note that in attacking his son, lying in the *gaga*, Totoima behaves in the manner of a wild pig while his son behaves like harvested taro. Totoima has partly a pig nature, partly a human nature, and these aspects are only partly differentiated. His son,

27: Schwimmer E-5 (1966-1970) 1979 OJ23 Orokaiva OJ23

tended to play down such a possibility. While the concept of exploitation is perhaps more directly relevant to Marxist theory than alienation, it has certain drawbacks that are now widely recognized. Where use-values are predominant it is common practice to set up not so much a division of labour (Vernant has rightly argued one cannot call it that) but rather an allocation of tasks to persons or social categories who are thought to have special competence for them. Thus, as the most common example, certain tasks are allocated on the basis of criteria like age and sex. Now, this is not in itself exploitation though obviously it may well lead to exploitation. We therefore need a criterion, other than that of the task allocation itself, to determine whether exploitation in fact occurs.

I shall press this point by citing one counter-instance. Among the Orokaiva only women are considered competent to harvest. Men never do it and claim that, if they did, the taro supply would be exhausted too soon. As an exception, they do harvest taro for feasts, and this exception only goes to confirm that they would be far too prodigal to act as daily harvesters. Is this just a story to exploit women? When crops are being marketed, the rule among Orokaiva is that the men carry the coffee and are paid for the coffee, but taro and other subsistence vegetables, when taken to market, are taken by women who also retain the money. Their right to the produce is maintained not only for the daily food supply but also when there is money to be earned. Their right to the product of their labour does not seem to be questioned. Thus, by the criteria we have been using, Orokaiva women are not an alienated labour force and it will be seen that *alienation* is more convenient in an operational sense than the concept of exploitation, which may be too broad.

While studies of alienation in Melanesia are rare, it is possible to give some indication of the patterns. M. Panoff, in his study of Maenge suicides (1970), did not question the generally accepted model of Melanesian society as governed by certain strong exchange and 'equivalence' principles. He points out, however, that there may well be a minority of marginal individuals who are somehow too weakly established to be within the range of those principles: they may at times press their rightful claims, but without success. Panoff shows that the male suicides among the Maenge occur as a general rule against this background of ruthless and unlimited exploitation. In fact it is only suicide that sets a limit to exploitation in such cases. The proportion of people Panoff places in that category appears to be of the order